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WHO WERE THE GREEKS?

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WHO WERE THE GREEKS?

BY

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PREFACE

These lectures ask a question—*Who were the Greeks?*—and attempt some sort of answer. It is a question which every historian must ask, sooner or later, about the subject of his studies, and every statesman about the object of his endeavors. And it is a kind of answer, in which history has more chance of becoming an applied science, as well as a graphic art, than in most of its tasks. Some day it will be permissible to ask, and possible to answer the question, "Who were the Americans?" At present what concern us more are the twin questions,—"Who are the Americans?" and "What are they in process of coming to be?" And the Greeks of classical times asked those questions too about themselves.

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In attempting an answer, therefore, a method of enquiry is sketched, with illustrations of its use, selected from those parts of a large subject where it seemed, in the spring of 1927, most needful to restate an old problem in view of recent advances of knowledge; sometimes in the hope that a solution has at last been found; more often with the conviction that until this or that piece of exploration has been put in hand, no solution is possible. It is some gain to have even an obstacle defined. But even where certainty seems to have been achieved, it is at best a vantage-ground for reconnaissance of what looms up beyond. And the fighting line in a campaign of this kind is a ragged one. Far too much has depended in the past on chance occasions, capricious hindrances and interruptions, individual preferences, and other irrelevant considerations, in the choice of the next thing to do. Our knowledge of many parts of the subject is fragmentary, not so much by reason of physical or political hindrances—though these, in Greek lands, have been serious—but because enquiry has been spasmodic and unco-ordinated.

Excavation is always expensive, and when funds are scarce, work is curtailed or suspended. Failure to make sensational "discoveries," and the supposed need to make them, divert attention from scientific to sentimental objectives. All this makes

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exploration more expensive still, by restricting the prospect of results. There was, of course, a time when it seemed better to dig about anywhere than not to dig at all: the unknown was so vast. But those days are over. We begin to know not only what to seek next, but how and where to look for it, efficiently and economically. This, like any other kind of strategy, presumes both knowledge and imagination, as well as patient persistence; qualities the combination of which means most to those best able to take long views and make comprehensive plans, in their own affairs, as in pure science.

So I have been careful to note, in the course of this argument, the points at which we are at present balked by lack of information, easily obtained at the cost of seeking for it. If this survey of a large question as a whole should initiate even a few of the pieces of research which if done next will rectify omissions, and connect outlying ends and corners of our knowledge, it will have been well worth while.

Fragmentary however as our information is, discursive and diagrammatic as discussion of it must be, it will be found to permit a reconstruction of prehistoric times in the Greek cradleland, on objective naturalistic lines, as a standard by which to test the statements which the Greeks themselves have left us about their origin. Even in the third and sixth chapters the Greeks' own stories about themselves are presented as part of the circumstantial evidence. Only in Chapter VIII, where circumstantial evidence must be supplemented by literary, does the subjective aspect of the question begin to appear; and at that point this enquiry may reasonably end. How the Greeks of the Homeric and Hesiodic age, and their successors, looked at their own problem of "living well," I have discussed already in lectures on the George Slocum Bennett Foundation on *The Political Ideals of the Greeks* (New York and London, 1927). The connection between the two themes is obvious, and is anticipated there in the sections on "Greek Lands," on "Geographical Distributions of the Greek City-states," on the "Origin of the *Polis*," and on the "Special Case of Attica," where an attempt is made to trace the debt of historical Greek communities to their Mycenaean predecessors, in respect of institutions and customs.

These aspects of the treatment here adopted must serve to explain certain wide variations of scale, and changes of standpoint, in the course of the argument; and also the total omission of much controversial matter. For the same reason the names of earlier workers, and acknowledgment of their contributions, will be found in the notes, not in the text. It would have been easy to double the length of this book by recapitulating always the stages by which present knowledge has been won; to fill a second volume with references to the pioneer-work of the past, old guesses, the mere refutation of which was a step forward through the new facts established; half-truths the significance of which has only been perceived by degrees. But to the reader it matters very much more what has been done, than who did it.

To keep the main argument clear and concise, only such facts have been cited as seem essential to the proof; and for easier verification of these, reference has been restricted usually to a few well-known textbooks and museum catalogues. As these include bibliographies and full references to original publications, it is hoped that much space has been saved without loss of efficiency. Though the Sather Lectures at Berkeley were fully illustrated, there has been no attempt to reproduce those pictures; all the more important objects having been repeatedly published elsewhere. But I have to thank Dr. Chas. Blinkenberg for permission to copy typical specimens from his *Fibules Grecques et Orientales* (Copenhagen, 1926), which supersedes all earlier discussions, and makes possible my own interpretation of the first safety-pins, in Chapter VII. They were carefully redrawn for me by Miss Amice M. Calverley.

The sketch-maps are due to the skilful draughtmanship of Mrs. O. M. Washburn. As each gives the geographical distribution of one class of data only, they must be compared with one another, and supplemented by the use of a large-scale map showing those physical features which so largely determine such distributions.

Though what is printed here is rather longer than what was spoken in March and April, 1927, there has been no serious change in the argument; the passages omitted in the lecture-room being for the most part such as did not admit of effective illustration.

For the same reason, it has only been possible to take account in the notes, or by occasional phrases in the text, of the numerous important works which appeared after the lectures were delivered. It is an encouragement to find that in Chapter IV I am in general accord with the views of Dr. Martin Nilsson in *The Minoan-Mycenaean Religion* (Lund, 1827), which appeared after the lectures were delivered.

For much help in revising proofs and verifying references, I have to thank Mr. W. F. Jackson Knight, and some of his pupils at Bloxham School, especially P. A. Schofield. Miss H. L. Lorimer, Fellow of Somerville College, Oxford, and Mr. Stanley Casson, Fellow of New College, have also read the whole, and called attention to slips and obscurities. I am especially indebted to W. W. A. Heurtley, Assistant Director of the British School of Archaeology at Athens, for allowing me to refer to unpublished results of recent excavations in Macedonia.

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INTRODUCTION

The purpose of these lectures is, briefly, to examine the Greeks' own beliefs about their origin, in the light of modern advances in the study of race, language, religious beliefs, arts and crafts, observances and institutions: to supplement and revise their notions from sources of information and methods of enquiry not available in antiquity; to take note of our own ignorance in many of these matters; and to submit a program of research. For it is no use to detect shortcomings unless you are ready with a remedy.

The course of human advancement has passed through three main phases, each expressing the result of man's attempt to realize all that a particular type of natural surroundings offered toward the achievement of felicity, that is to say, the best mode of life that was possible then and there. The first of these phases is represented by the civilizations of the great river valleys, Hoang-ho and Yangtze, Ganges and rivers of the Punjab, Euphrates and Tigris, Nile valley and delta. It depended on a single great advance in man's control over nature, namely, the domestication of running water to irrigate, and thereby make fertile, land that was barren before. This invention permitted intensive food production on a large scale, and consequently the settlement of a multitude of people within easy reach of each other, all assured of mere maintenance and some of leisure to practice crafts other than food production. With the products of these crafts the well-being of all was amplified and enhanced; and thus were achieved coherent and distinctive cultures.

The second phase came into being around the shores of a lake region, tideless, and in parts island-strewn. It depended on another great advance in control, namely, the

use of such a water surface as a vehicle for intercourse between its coasts, using mere currents, man power, and wind power for propulsion, permitting interchange of commodities, local specialization of food production and craftsmanship, and propagation, coastwise, of the surplus population of these specialized communities, within the wide range of uniform physical conditions characteristic of lake regions. In its mature shape, the Roman Empire, which was the political superstructure of this lake-land civilization, consisted literally of an *orbis terrarum*, a "ring of lands," maritime regions inward-facing onto this midland or "Mediterranean" Sea. A few outward-facing districts, held for frontier defense, were anomalous, precarious, and eventually dangerous appendages, never wholly assimilated, and early lost.

The third phase began with Phoenician and Greek exploration of other coast regions outside this lake-land and accessible from it by water between the "Pillars of Hercules." This régime only gained economic and political significance when Caesar's conquest of Gaul confronted Rome's Mediterranean empire with an Atlantic sea-power among the Veneti of Brittany. Cardinal extensions, here, of man's control over natural forces are his utilization, first, of tidal estuaries to carry large vessels upstream into the heart of regions fronting on the ocean; and then, of perennial "trade winds," to traverse securely that expanse of water, and make accessible lands of similar climate and resources, through similar tidal avenues such as the Hudson. These two oceanic resources combined have brought into domestic occupation not only the North Atlantic, but other ocean basins with coast lines incomparably more extensive than those of peninsular Europe, and more diverse in their natural resources. And the domestication, eventually, of a quite different source of power from combustible minerals—ultimately derived, like the winds, from the same solar energy—has achieved a

mechanism of transport commensurate with continental obstacles and oceanic storms, as well as a mechanism of production commensurate with the needs of modern aggregates of humanity, and their enhanced capacity for the enjoyment of a life worth living: modern music and modern mathematics succeeding to the *mousiké* and *mathemata* of the Greeks.

Now within each of these main phases of advancement, and in every region wherein any one of them has occurred at all, these various controls over external surroundings have been achieved by a particular kind of Man; not necessarily always by the same kind in any one region, nor even usually —if indeed ever—by homogeneous, thoroughbred strains; but always by the human occupants of a particular region within a particular period of time. And it is a necessary counterpart to the enquiry, *what* it was that happened, and why what happened *there*, happened also just *then;* to ask further, *who* were the human agents, *how* they came to be there at all, and what equipment of traditional skill or outlook they brought to the solution of life's problems *then* and *there*. This question is the more important, because the perspective of history is already long enough to show us successive attempts on the part of different peoples to make themselves at home in the same natural region, only a little defaced by previous occupants. Sometimes these successive exploitations have been on similar lines,—like the outflows of Semitic-speaking peoples from Arabia—and to this extent it may be said that "history repeats itself"; sometimes their results have been quite different, like the Celtic and the Teutonic exploitation of Britain. More usually they are alike in some respects, but different in others, as were the Minoan and Hellenic cultures in the Greek archipelago, with both of which these lectures are concerned. For while the human energy and originality of outlook which created the Mediterranean phase of culture, and chiefly directed its

course, were the energy of the Greek people and the initiative of Greek genius, the Greeks of classical times were not the first people to make this experiment, though their predecessors' adventure was thwarted before they had carried it to completion, or made the Mediterranean world Minoan as their successors made it Greek.

This view of the matter does no injustice to those great co-partners in Greek enterprise, and champions of the Greek view of life in so far as they understood and accepted it, the Romans, and those Italian peoples who, unlike their cousins in the south, were Romanized before they were Hellenized. Great as the Romans were, in ability to organize others without assimilating them, and to provide an administrative structure within which assimilation did eventually occur, it was not the culture, nor even the political ideas, of their homeland, to which the provincial populations eventually conformed. Roman law itself owes its coherence and philosophical basis to Greek notions of authority and observance, conformity and freedom; Roman literature and art are an interpretation of Greek originals, ingenuous, uncritical, often either pedantic or slipshod; Roman morals and politics hardly found expression at all before they were transformed by Greek philosophic schools, already heirs to a long tradition of critical thinking. It is the Romans' contribution to humanity, that they made safe for Hellenism, and in due time for Christianity, a world which the Greeks, like the Hebrews, had found (and left) quite unsafe for themselves. That while they facilitated the spread of Hellenism, they accepted so much of its gift as they actually did, was fortunate; that they should assimilate something, was inevitable; for if they were to play the protector's part at all, they must at least recognize what they were there to maintain.

We must remember also that in the Italian Renaissance it was the grandeur of Rome, quite as much as the trans-

mitted charm of Greece, that inspired imitation; that the Counter-Reformation in France deliberately preferred the "classical" conventions of Roman literature and Roman architecture, to the naturalism of Homer and the ruthless rationalism of Attic drama and the fourth-century philosophers. The masterpieces of Greek design were out of reach and out of mind, in Ottoman territory; and neither Pope nor Bentley, nor even Robert Wood, achieved in England that revelation of the "original genius of Homer," which Wood at all events transmitted to Wolf and Goethe. It was not indeed till the "Elgin Marbles" came to London, and the "Aeginetan Pediments" to Munich, and men so differently equipped as Leake and Cockerell and Karl Otfried Müller inaugurated exploration of the Greek homeland itself, that it became possible, for example, for Gerhard to recognize "Etruscan" vases as the work of Ægean craftsmen, and in due time for Newton to rediscover the Mausoleum, and Schliemann "Homeric Troy"; for the new German Empire to offer to the new Greek kingdom the men and the means for excavation at Olympia, and for the French School at Athens to recover Delos and Delphi. Only gradually, too, was the real significance of Rome distinguished from that of its Greek teachers and protégés, most of all by the historical insight of Niebuhr, in the first days of modern German scholarship, and by the massive learning and superb organization of Mommsen concentrated on the question "what really happened" in the Roman Empire.[1]

Popular Notions about the Greeks

Who, then, were the Greeks? Popular answers to this question might be provisionally summarized as follows. When we speak of the ancient Greeks, we mean, most of us, in the first place, those predecessors of modern Greek-speaking people, who spoke the Greek language in its

"classical" form, and composed the Greek literature, from the Homeric poems to the chronicles, sermons, and hymns of the Byzantine age; the inspiration of whose masterpieces gave a new spirit and direction to Latin literature, and the recovery of which for Western Europe made possible the Revival of Learning, and therewith that new outlook on the world and on life, of which even now we have only a beginner's enjoyment.

Next, we mean the creators of Greek art, in its two main achievements, decorative and representative, whose masterpieces still rank among the supreme achievements of humanity in this kind, and have been accepted as "classical" and canonical standards in aesthetic criticism, much as the religious and moral writings of ancient Israel have become "canonical books" in that other domain of experience. The decorative art of the Greeks we value and enjoy, as our public buildings and a large part of our industrial designs testify, for its superb craftsmanship, its mastery of materials and principles of design and construction, above all for its unique sense of proportion, which sometimes we are able to reduce to rules and formulae, but of which more often the rational basis eludes us, outranging critical analysis, and challenging all our science to explain the inevitableness of their art. In the representative arts, sculpture, modeling, and painting, we are confronted further with the Greek conception of human beauty, a physical perfection of anatomical type, based on intimate observation of what we shall find to have been living types among the artists' contemporaries, but idealized, or (more truly speaking) nationalized, and at the same time rationalized by profound apprehension of generic features,—of the universal among the countless individuals and particulars, the "substance of things seen"; just as the decorative art of their craftsmen has seized—each according to his ability, but all in amazing accord—among the many tables or drinking cups of Greek

daily life, the perfect notion of that kind of support or receptacle, "laid up for ever in the place of thought," as their philosophers expressed it, or (more popularly phrased) "in the mind of God." So too, in Greek literature, the thoughts and desires and doings of Greek men and women are transmitted in a remote perspective like that of the fixed stars and of the Parthenon frieze, *sub specie infinitatis*, as when Æschylus calls up the Ghost of Darius to reveal to the war-shocked Persians "what the new trouble is that racks the state," as he sees it from beyond all that; or when Thucydides makes Periclean Athens or the frenzied factions in Corcyra "a possession for all time," by which to know the City at Peace, or at war within itself, as on a new "Shield of Achilles."

Thus, looking rather deeper, below the surface of literary and artistic achievement, we learn to know the Greeks as exponents of a Greek "view of life," based on the *mode* of life austerely imposed on them by the rigid conditions of their geographical surroundings, but rationalized and thereby idealized, once again, into an outlook on life commensurate with their aspiration "not only to live, but to live well," in the fullest sense. Projected into the safe custody of the past, and into "Olympian dwellings" above the clouds, there is the natural grace and unconstrained humanity of those superb children, the Greek gods and heroes, an unexhausted store of personalities, events, and situations "written for our learning" out of the open book of folklore and (as we come to understand it) of folk-memory, in the sense that it was not only "Homer and Hesiod who made for the Greeks their gods," but other teachers, inglorious but by no means mute, whose creations are the repertory of Greek drama, Greek vase painting, and in later time of Greek scholarship and encyclopedic commentary.

But Greek mythology owes much of its charm, and of its appeal to the imagination of all aftertime, to that

amazing divorce between the doings of the gods and the affairs and conduct of their votaries which is characteristic of the Greek substitute for a theology. For whereas Hebrew thinkers, who in this respect reached the high-water mark of theocratic culture, and alone gave voice to its yearning after some *modus vivendi* between God and Man, inevitably codified all the law they knew into the two tables of *Duty toward God* and *Duty toward my Neighbor*, Greek philosophy, analyzing in the same way the common experience of its own age, resolved all minor obligations also into two;—political obligation, which is my *Duty toward my Neighbor* as in the Hebrew code, and moral or ethical obligation, which is my *Duty toward Myself*, no longer to any god or gods, whom the Greek people loved indeed still, and tended, but had outgrown. And it is between these two poles of conduct, moral and political, that all study and presentation of the Good Man and the Good Citizen is oriented and aligned, in dramatists, historians, orators, and philosophers alike. On these "weightier matters of the law," the old gods might "give help"—to use the remarkable phraseology of Greek oracles—but this "help" Man was free to accept or to ignore. His choice was as free as human knowledge could make it; but while "virtue was knowledge," and action in accordance with knowledge was the crown of virtue, the admission of "error" through "forgetfulness" was as near as Greek lips could go toward confessing what we call "sin."[2]

Less popularly—and this "less" we must both regret, and remedy as we can—the Greeks are recognized as the people whose communities are the first expression, in their infinitely varied constitutions, of the supreme political art of government-by-consent; of a rule of right in reason, the sole conceivable alternative to that rule of might by force which had erected, dominated, and devastated in turn the kingdoms of the Ancient East, and gave to every such

"dynasty," or "rule of force," the sanction of gods made in its own image, observed by theocracies and priest-kingships, a régime "full of darkness and cruel habitations." For with the Greek conception of citizenship, of a new relation between individual and state, based on the "capacity of a free man for exercising initiative, and being initiated for, in turn," mankind acquired two new concepts of behavior, and new departments of philosophy. Once again, on the side of social anthropology, as on the physical side, the same question looms up. "Who were the Greeks?" and how did they come by this quite exceptional emancipation from their own traditional past, from that Homeric state of society in which kings alone were as the Lord God, Zeus-born, "knowing good and evil"; not merely "shepherds of the people" like the Shepherd of Israel, but "masters of men" as a man is "master" of his horses or his dog? How, in fact, does it come that in the full "grown-up-ness" of citizenship—to translate quite literally their word for personal and for political freedom—the Greeks so nearly reached, in their great moments at all events, what the Hebrew contemplated but relegated to his irrecoverable past—that "they should be as gods, *knowing* good and evil"?

Summarizing then these aspects of popular notions about the Greeks, as (1) a distinct and peculiar people with its own standards of physical perfection, and consequently a clear self-consciousness of how a thoroughbred Greek should look, in the flesh; (2) with its own characteristic modes of expression in the arts, and more especially in its common language; (3) with its own notions of a rational order in external nature, in society, in individual experience and conduct, its own ideal standard of living,—of a "good life" in the fullest or highest sense;—we shall easily see how little these popular notions fall short of what the old Greeks believed about themselves.

The Greeks' Own Story About Themselves: Criteria of Nationality

The Greeks themselves seem to have elaborated already, in the sixth and fifth centuries B.C., a rationalized and, on the whole, consistent theory of their own origin. From what data they formed their conclusions, we hardly know, except here and there, and in outline; but we are fortunately able to recover at all events the main principles of their anthropological scheme. In an explicit summary of what constitutes a nationality, Herodotus distinguishes four different criteria; for when Xerxes' envoy tried to persuade the Athenians to desert the cause of Greek national freedom, they justified their refusal on the fourfold ground of "Greekness, which is of one blood, and one language, and sanctuaries of gods in common and sacrifices, and behavior of similar fashion; and this it would not be proper for Athenians to betray." Community of descent, community of language, community of religious belief and ritual, and a common mode of thought and behavior in everyday life; these are the signs by which a nation is known, and the bonds which make it one and indissoluble. The third of these, community of religion, we may discount, if we please, as being only a peculiarly delicate test of community of behavior generally; but, with this qualification, the tests propounded by Herodotus are those which are accepted by modern anthropology. Of the use of all these criteria, and of the evidence appropriate to each, examples are abundant in the pages of Herodotus and Thucydides.[3]

But to a Greek historian "community of descent" meant similarity of traditions of descent, unverified—and unverifiable—by contemporary documents, or by more than the most superficial comparison of physical types. "Community of language" was recognized by the crude test of mutual

intelligibility, at the same time too strict and too lax; reinforced only by superficial resemblances between individual words, traced without acquaintance with phonetics, without working knowledge even of the remoter dialects of Greek, much less of Phrygian or any non-Hellenic language, but with such ingenuity in framing popular and punning derivations for queer words as all children enjoy, and most savages. "Community of religion" and "community of behavior" seldom implied more than obvious similarity of unessential names and forms, or such broad identity of purpose as would prove nothing worth proving, even between races or peoples that were really related to each other. Greek ethnology, like our own, was beset with "diffusionist" theories, Phoenician, Egyptian, Assyrian,—and even had a modest inkling of the doings of the "Children of the Sun."[4] With these drawbacks it is only to be expected that it should be inconclusive and inconsistent in detail; but for the same reason it will be the more noteworthy, if we find that its main outlines are serviceable as a working hypothesis.

One cardinal belief, in particular, could hardly have passed into common acceptance if it had not been founded on facts of common knowledge. The Greeks of the classical period firmly believed themselves to be a mixed people, and held further that each of the primary components of this mixture was itself composite, and variously composed in different districts. Stripped of mythical and legendary personalities, their view, in substance, was that not very long ago a small group of tribes, of superior natural endowment, to whom alone the name of "Hellenes" originally and properly belonged, had spread from the particular district of Phthia, or Achaea Phthiotis, in South Thessaly, and that this "little leaven" had worked among the mass of non-Hellenic barbarians, until the whole was leavened with Hellenic culture. Herodotus, for example, says that the inhabitants of Attica, most conspicuous in his own time

for all qualities that were Hellenic, were not originally Hellenes, and had only become Hellenes by acquiring Hellenic language and customs.[5] Thucydides adds that the superior people need never have been numerous, and that they owed their influence to superiority of culture, not to any replacement of old inhabitants by new. The great "migrations" from "Arne" and "Doris" by which the actual distribution of the principal varieties of Greeks had been effected, he describes as a redistribution of peoples already so Hellenic as Homer's Achaeans and their Dorian conquerors, not as the first spread of the Hellenes among barbarous neighbors.

The aboriginal pre-Hellenic population passed under many names, "Cranaan," "Lelegian," "Carian," among which "Pelasgian," the commonest and least vaguely conceived, came in some measure into generic use.[6] To such pre-Hellenic and non-Hellenic peoples, tradition here and there ascribed ancient fortresses of rude construction, in districts now Greek;[7] and when speculation about Greek origins became commoner, other ancient remains, of which tradition had nothing to say, chance finds of ancient objects, barbarous superstitions and grotesque customs, were referred to "Pelasgian" or "Carian" times.[8] Some Greek-speaking tribes, in a backward state of culture, were thought to be still imperfectly Hellenized; and other tribal remnants which lingered in hill-country, or on capes and islands on either side of the Ægean, still speaking a language which could not be recognized as Greek, were regarded as actual survivors of a "Pelasgian," "Lelegian," or "Carian" population.[9] As exploration increased Greek knowledge of other countries, the opinion became common that some native tribes of Italy, Sicily, and North Africa were of the same "Pelasgian" stock, or preserved "Pelasgian" customs.[10]

Greek stories of immigrants from oversea, from Asia Minor, Phoenicia, and Egypt, are not at all of the same

racial interest as those of the "coming of the Hellenes." They refer either to individual adventurers, such as Danaus or Pelops and their families, or "Cadmus and his people," who introduced the art of writing at Thebes; or wonder-working craftsmen summoned for a specific purpose, like the "round-eyed" Cyclops-folk from Lycia, who built the rude walls of Tiryns.[11] These were clearly attempts to explain the introduction of what seemed to be foreign elements in the early culture of Greek lands, by connecting them with legends of foreign immigrants. Some of these "culture-heroes" were thought to belong to periods before the coming of the Hellenes—especially in Attica and Argolis; but the arrival of Cadmus at Thebes was approximately contemporary with this, though quite independent of it.[12]

Modern Criticism of Greek Traditional History

For a long while, this traditional account of Greek origins was accepted without dispute. With the discovery of Sanskrit, however, at the beginning of the nineteenth century, came the comparative study not only of language with language, in respect to structure and vocabulary, but of dialect with dialect within the limits of a single kind of speech; and therewith the discovery, first, that the Greek language belonged to the same widely distributed Indo-European "family" which includes Sanskrit and Old Persian eastward, and the Italic dialects and Celtic westward; secondly, that within this "family," Greek belongs to the same western group as Italic and Celtic, whereas its nearest ancient neighbors, Thracian, Phrygian, and Armenian, belong to the eastern; thirdly, that the Greek language itself, while it had in many respects preserved ancient forms with very little change, nevertheless contained a quite unusual proportion of words peculiar to itself, or at all events unrepresented in any cognate language, and also that whole classes of names for persons and places were devoid of

meaning as Greek words; and fourthly, that the traditional classification of Greek dialects as Doric, Æolic, or Ionic was only appropriate in regard to the speech of the comparatively recent settlements of Greeks on the coast of Asia Minor,[13] and was inadequate to explain either the peculiarities or the geographical distribution of the dialects of peninsular Greece. That the Greeks themselves were partly conscious of this is clear from their recognition of a fourth subdivision of Greek peoples, the Achaeans, alongside of the traditional three; but their association of it more closely with the Ionian than with either of the other primary groups shows that they were less concerned with linguistic distinctions—for the Achaeans of historic times all spoke Doric dialects—than with traditional affinities, or even with differences of breed: at all events the common ancestor of Ionians and Achaeans is called Xouthos, a purely descriptive term for *brown* hair, fur, or plumage; and this at a time when it was apparently common knowledge that the Dorians were blond, and the Æolians more or less mixed, as their Greek name seems to imply.[14]

It was not unnatural that, in the early days of comparative philology, attempts should have been made to draw conclusions from the similarities between these languages, and from their geographical distribution, to relationships between the peoples who spoke them; and to reconstruct the characteristics, the movements, and the place of origin, of a hypothetical "Aryan Race," of which the Greek-speaking peoples should be, in their Hellenic aspect at least, an offshoot. But it has long been obvious that a people may acquire a new language from a comparatively small number of immigrants, without permanent or significant change of breed; and that it is not an easy matter to distinguish what may provisionally be described as the spontaneous evolution of a language from the perversions which it undergoes when it is spoken by unaccustomed lips.

It was not long before the comparative study of languages led to the comparative study of religions, or (more strictly speaking) of those glimpses of early beliefs which are offered by the names, attributes, and functions of gods. At first, it was the similarities between the Greek Zeus, the Roman Jupiter, and the Teutonic Odin which attracted attention, and seemed to reinforce current arguments from similarities of speech. But in time, attention was drawn to a few broad uniformities among the beliefs and practices most obviously alien to the worship of "Indo-European" deities, and it became clear that the earliest peoples of the Mediterranean coast-lands had had not merely religious practices, but religious systems and a natural philosophy of their own. Here too it became evident that though, in their general grouping and many of their functions, the great Olympian deities, whom Greek peoples venerated, resembled the groups or families of deities worshiped by Aryan-speaking peoples in India and early Iran, and also those of Italic-speaking peoples to the west, and Celtic and Teutonic folk beyond the Alps, the Olympic family did not include all the counterparts of these other groups, while it did include deities so important as Apollo and Poseidon, whom it was difficult to recognize elsewhere. Still more significant was the discovery that whereas in the earliest Greek literature, the Homeric poems, the Olympians were completely human in character, attributes, and functions, the conception of them in "classical" times included many features of nature-worship, and particularly associations with various animals, plants, and other objects, while their worship admitted magical and other primitive practices quite alien to Homeric anthropomorphism. Meanwhile it became clear, on the other hand, that even in Greek belief the Olympians were anything but indigenous deities on Greek soil; they were believed to have won their occupancy by displacing older gods, and some of the crude and cruel practices already

mentioned were explained in antiquity as survivals from earlier religious rites. In their actual presentation, the gods of the Greeks were believed by Herodotus, for example, to have been due to the poets "Homer and Hesiod," only about four hundred years before his own time.[15] Clearly his own claim that the Greeks as a nation had "similar establishments of gods, and sacrifices" was to be understood only in the most diagrammatic and general sense. At Athens, for example, the worship of Olympian Zeus seems to have been introduced as a novelty by Pisistratus in the latter half of the sixth century, and in the same city the family of Isagoras a generation later was worshiping a Zeus who was in some sense "Carian," not Greek at all.[16]

Thus "comparative philology" and "comparative religion" held the field till 1871. Then Heinrich Schliemann realized his lifelong ambition to test with the spade the tradition that Homer's "City of Troy" underlay the ruins of Graeco-Roman Ilium, at Hissarlik on the south side of the Dardanelles, and revealed there not one but eight superimposed settlements, of which the relative dates were manifest; of which even the sixth from the bottom was destroyed before the use of iron was demonstrable, while the first of them belonged to the transition from the latest Stone Age to the earliest bronze-using culture. With the long and brilliant series of discoveries which followed, at Mycenae and Tiryns, in Attica, at Thebes and Orchomenos, in the Cycladic islands, and above all in Crete, and with the more recent extension of similar research to Thessaly, Macedon, and Thrace, as well as into the Danube basin, we are only so far concerned here as to note that this archaeological evidence provided a fresh and independent background of prehistoric periods of culture, and even of crises and local events such as the capture and destruction of towns, which not only can be described as relatively earlier or later in the series, but can also be assigned to their

approximate places in the chronology of contemporary Egypt, in which events can be dated (with an average error of three or four years) as far back as the sixteenth century B.C., and with certain reservations for some two thousand years earlier. Consequently the literary tradition of the rise and fall of this or that early center of culture or political influence gains fresh significance when it is found that its rough and ready calculation of dates by generations of men yields results which are conformable with archaeological evidence for the settlement, destruction, or rebuilding of those places. The philological evidence as to the distribution—still more the redistribution—of dialects from time to time, gains coherence when redistributions of this or that type or element of material culture are demonstrable from the contemporary witness of original objects of daily use. And the legends of gods, and evidence from the survival of odd customs or primitive objects of worship, fall into their proper place as commentary on actual places of worship or cult-objects, of which the date and duration are known, as well as the geographical distribution of similar cults, and the period at which the historical sanctuaries of Olympian gods were established to supersede or incorporate them.

Archaeological premises, however, have no more claim than philological or mythological data to warrant ethnological conclusions. Men can adopt a culture and mode of life, with its arts and industries, as they can learn a language or accept a religion; though it must be admitted that in all these respects women are more tenacious of existing usages. The one thing that neither sex can do by taking thought is to alter permanently the color of their hair and eyes, their stature and build, or the natural shape of their skulls; though they attempt to disguise all these, and in these protective devices the women show greater adaptability than the men. Man, that is, though he alters deliberately the breed of his dogs, horses, and cattle, pays little or no atten-

tion to his own; if he achieves such a thing as the Greek type of beauty, it is as little premeditated as the Mongolian eye or the Negro lip and hair. There remains therefore a great gulf fixed between what a people is by descent and breed, and what it has become through the discipline of habits and ideas.

Yet the difference must not be exaggerated. It was the great achievement of a single group of enquirers, Pitt-Rivers, Tylor, and Lubbock, to apply the Darwinian hypothesis of evolution by selection of the fittest-to-survive among a multitude of biological varieties, to explain the patterns and styles of the products of arts and industries, or the habits and customs which characterize a civilization; wherein the original variations are no less spontaneous in their way than those among animals and plants, however clearly we recognize them as due to individual acts of choice between alternative ways of doing or making things in the daily round of human life.

Finally then, there are the material remains of the ancient people themselves, recovered from tombs and more rarely from the sites of settlements; not very numerous as yet, nor so carefully recorded formerly as modern practice requires; but sufficient to establish a few broad outlines of the ethnography of Greek lands from very early times, to give historical perspective to our more copious records of the modern population, and also to interpret the collateral evidence of Greek literary allusions to physical build and complexion, and of Greek representations of men and women in the sculpture and painting of successive periods.

These are the chief new challenges to research, and sources of information in regard to the origin of the Greeks. But it will be obvious that they became available in a rather accidental sequence of events; and that to arrive at a clear notion of their collective results, we must deal with them in a more systematic order.

Program of Enquiry

Our procedure therefore will be, first, to survey the physical structure and natural resources of Greek lands as the cradle and home of a great people, with special reference to the avenues of approach to it from other regions, and to the austerity of the selective control exercised by climate, food supply, and other geographical factors, on the fortunes of any kind of man who happens to establish himself within this very exceptional region.

For we are indeed concerned with a region of peculiar structure and configuration, climate, and resources; minutely subdivided and presenting so many different types of environment locally that it is itself a *microcosmus*, a miniature universe; almost competent to maintain human communities self-sufficiently, and consequently fertile in solutions of the supreme question "how to live well"; but never immune against intrusion, and indeed often inviting this, especially when people long in possession of it have put the finishing touches of their own housekeeping on its landscape, and made wild nature their paradise.

Who these people were; who first exploited this region; and who thereafter intruded into it and occupied it, is obviously our next enquiry. We have to review the evidence as to the physical breed or breeds from which the ancestors of the classical Greeks were derived; to determine their distribution, and draw such conclusions as may be reasonable as to their source and origin, the order and date of their arrival in Greek lands, and the extent to which they either maintained themselves as a recognizable element in the Greek people, or faded out of it. We shall find that one outstanding contrast in physical type between the classical Greeks and both their predecessors and their successors demands special consideration, and points to the Greek

language as likely to furnish the clue to an explanation, through its structure and the geographical distribution of its dialects.

Thirdly, then, in the light of our conclusions as to community or diversity of breed, we shall examine the distribution of the principal dialects of the Greek language, and attempt similar inferences as to their history, and redistribution at each other's expense from time to time. We shall also have to raise the question, what language or languages were in use before the spread of Greek speech of any kind over the regions where it was spoken in historic times; and what conclusions may be drawn from this.

Fourthly, in view especially of our conclusions as to the origin and spread of Greek speech, we shall distinguish the principal elements in Greek religious beliefs, and ask which, if any, of them, are connected with the people who introduced the Greek language; and which, with the cultures and languages found to be already established in this or that district. We shall further find in Greek hero-worship a clue to the nature of the process by which old and new beliefs were adjusted to each other.

Fifthly, by examining the principal phases and local varieties of material civilization, as revealed by archaeological research, the attempt will be made to define the more important breaks in the course of that series of developments; to determine their causes; and in particular to trace the movements of all bodies of people competent to occasion changes of physical breed, of language, or of religious belief, of the kind already detected. This, as already explained, may be possible with some approach to chronological accuracy; and also with a depth of chronological perspective quite unforeseen even by those early Greeks who recorded, from current folk-memory, pedigrees running back to the fourteenth and fifteenth centuries.

It is indeed difficult now to realize that for scholars only two generations ago Greek history seemed to begin with the First Olympic Festival in 776 B.C. Before this date a vague prelude was recognized of unverifiable traditions about a period of invasion and emigration; before that, a "Heroic Age" of wars and wanderings, chronicled in the Homeric Poems; and earlier still, another series of legends and myths, and the belief (formulated in retrospect by Hesiod) in the sequence of the Ages of Gold, Silver, Bronze, and Iron, of which the last was already so far advanced in Hellenistic times that men began to look forward to the day when the wheel of change should have turned full circle, and "bring back the age of gold," making all things new. It attracted little attention that Hesiod's theoretical sequence was interrupted by his intrusion of the Heroic Age between the Age of Bronze and that of Iron; and that moreover a more or less historical basis was thus given to all three, seeing that there were families still among the living who traced their origin from one Homeric hero or another. The Neleid clan in Ephesus and the family of Pisistratus at Athens went back to Nestor, king of Pylos; and Evagoras, king of Salamis in Cyprus at the end of the fifth century, was twenty-second in descent from its founder Teucer, brother of Ajax. But in the last fifty years the pioneer enthusiasm of Schliemann, and the systematic research of men like Montelius and Sir Arthur Evans have substituted for the Hesiodic diagram of the Five Ages the revelation of a whole cycle of culture,—at least as long, from adolescence to collapse, as the interval between Agamemnon and Charlemagne,—and of a world in which, though the geographical scene was the Ægean region, there were, as Thucyidides expresses it "not even any Greeks yet," any more than there were any Englishmen in Roman Britain.

Now, in this new perspective, and in view of the establishment not only of a historical sequence of pre-Hellenic

events, but even of chronological dates for some of its turning points, the formation of the Greek people itself has become a historical event; in the sense that *there* and *then*, within a given geographical régime, and a limited period of time, not only an original but a *fresh* attempt was made to live, and to live well, in those geographical surroundings, *in* a new kind of society; *with* a type of culture; and (in some degree) *by* a variety of man, which did not exist there before; and not only did not exist there before, but, *when* and *where* it came into being, replaced a civilization, which had existed there, and had offered its own remarkable and very different solution of the same fundamental problems.

Sixthly, therefore, it will clearly be desirable to test our reconstruction of the historical origins of the Greek people, by comparing it with the principal outlines of Greek traditional folk-memory. If the two pictures disagree, we must endeavor to account for the failure of the Greek people to preserve accurate record of their antecedents, and for the amazingly vivid substitute which their fancy must in that case have created. If, on the other hand, the data of research and of tradition tally, we have not only additional confirmation of our own reconstruction from a quite independent quarter, but also unexpected confirmation of the historical value of Greek folk-memory, which may serve us in the future as a clue to the meaning of observations which do not yet explain each other. We may even find reason to maintain certain general conclusions as to the circumstances in which such folk-memory may be trusted for historical information.

Seventhly, granted that we have ascertained the chief ingredients in the make-up of the Greek people, and determined the date and mode of their commingling, we have still to discover how it came about that from this mixture, and in these historical, geographical, and cultural circumstances, the outcome was such a people as the Greeks of the

classical period. This will require separate and rather special examination of some of the more significant changes which occurred during the very obscure period which immediately preceded the "great age" of Greece. We have to account both for the collapse and disappearance of the brilliant culture of the later Bronze Age, and also for the many points of contrast between that culture and the ruder state of things which superseded it.

Finally, we have to attempt such an analysis of the nascent civilization of historic Greece as will indicate what elements it derived from that immediately preceding barbarism; what (on the other hand) it retained, or recovered, from the previous Bronze Age; what (if anything) it acquired from contemporary civilizations of the Nearer East; and lastly, wherein consisted its own unique contribution, which transmuted each and all of such materials and instruments into that original creation which is the Greek way of living, and of which the living exponents were the Greek people. For while we rightly regard Greek culture as the creation and gift of the Greeks to mankind, those Greeks themselves in each generation were the result and outcome of Greek culture, as it had come to be when they inherited it. That is the significance of the appeal of Pericles to his countrymen, at the climax of their fortunes "not to hand on diminished" the heritage which had come down to them.[17] That too is the meaning of the prospect which Jason had opened to Medea,[18] and Aristotle holds out to each enforced convert to the Greek way of living, whom he "congratulates on account of their hope" to attain the full measure of adultness, self-sufficiency, self-mastery, which is the Greek notion of freedom.[19]

I am well aware that some of the conclusions to which the evidence now available seems to point, may bring disillusionment in regard to traditional beliefs about racial solidarity, perhaps even disappointment that aspirations

warmly cherished must forego sentimental appeal to that aspect of a great national past. I would only submit, at the outset: (1) that the racial characteristics of the modern Greek people are a different and quite separate subject, which only concerns us here incidentally and by way of historical parallel; (2) that an Englishman, especially when addressing an American audience, may perhaps go farther without offense, in the way of racial analysis, because he knows that his own nation is physically one of the most composite and mongrel bodies of people that the world has seen; and that nevertheless it has managed to play a part in history which is of some significance, if not so brilliant or epoch-making as that of the ancient Greeks; (3) that if my story has any moral at all—and I am not sure that a scientific discourse has any business to have a moral—it is that what makes a people effective is unity of corporate aim and action, rather than uniformity of individual build; and that what gives value to a culture is not its hereditary but its contagious quality, its power to influence the course of ideas as well as events, to dominate the thoughts and behavior of men of other descent and traditions; to annex not territories but proselytes, to win men's souls to a Way, a Truth, and a Life.

Geographical Presuppositions for Historical Enquiry

May I next assume, as common ground for any discussion of the characteristics of any people, ancient or modern, that the structure, functions, and mode of behavior of any natural species or variety of living being emerge during a process popularly and I think truly described as a "struggle for existence": as the outcome, that is, of an effort, instinctive in its earlier but not necessarily simpler phases, increasingly conscious and rational as it goes on, on the part of those individual living things which collectively are such

a group, not merely to maintain and propagate that kind of life, but to make the most of it; in the most comprehensive sense, to enjoy life. But all such effort, such struggle for existence, takes place in the physical conditions of some geographical region—by which I mean a part of the earth's surface characterized by a general uniformity or type of interacting forces, which we may describe as geographical *controls;* configuration of the landscape, succession of the seasons, association of edible, useful, or noxious sorts of other living things, engaged in similar struggle for existence, and for well-being.

Obviously the precise quality and outcome of such a struggle for existence depends only partly on the present efforts of living individuals, however momentous and irrevocable the consequences of each successive effort on their part. It depends also partly on the nature and austerity of the regional control; and partly on the direction already taken in the immediate past, and this in turn on the direction in the remoter past, by the efforts of previous individuals, and the good fortune which has permitted the survival of those among them whom, in view only of the fact of their survival, we describe provisionally as the "fittest" under the given circumstances.

Geographical Distribution of Greek Peoples

Now we shall see that both in ancient and in modern times the Greek people, like all other peoples and races of man, has had a fairly definite geographical distribution. In ancient times, especially, its distribution was very clearly limited to a peculiar kind of community, which the Greeks called *polis* and we clumsily translate as a "city-state." And these Greek city-states are recognizable, by their geographical distribution, either as colonies, straying along certain avenues of propagation where the conditions for such life were favorable—just as cultivated plants are found to

stray and propagate themselves in favorable nooks of wild country beyond the garden to which they belong; or else as the characteristic and normal type of human community within a comparatively small region which we may provisionally describe as the cradle-land of the Greek peoples and of the city-state type of community.

That area of colonial expansion, over which Greek city-states became established in a period of about two centuries, from about 750 B.C. to 550 B.C., covers a large part of the coast of the Mediterranean region, from the mouth of the Ebro to Cyprus and Cilicia; from Cyrene on the north coast of Africa, to Marseilles, Naples, Odessa, Kertch, and Batum along the sea front of all Europe and the Caucasus. From the historical memories of the people of these colonies we know, in most cases precisely, the name and position of their *metropolis*, their mother-city or place of origin; and these mother-cities all lie within certain regions around the Greek archipelago, which is therefore in a general sense the cradle-land for which we are looking. Only after a very significant pause of about two centuries more, from 550 to 330 B.C., did the conquest of Persia by Alexander of Macedon throw open a vast continental area to Greek colonization of a rather different kind, which went on intermittently until the first centuries of the Roman Empire, and was the chief instrument in the spread of the Greek language, Greek culture, and (to a certain extent) of Greek blood, from Philippopolis and Adrianopolis in southeastern Europe, temporarily to Bokhara and Candahar, and more permanently to the Euphrates and the boundaries of Armenia. Many of these inland communities preserved their Greekness in essentials until the Great War and the massacres and expulsions which were allowed to happen after it was nominally won; and a few of the smaller islands of the Archipelago are still governed under constitutions which are historically continuous with those of their city-states.

From the period of colonization onward, the fortunes of the Greek people are a matter of history. They will only concern us here in so far as we may have to supplement the rather scanty evidence for what was going on in earlier periods by illustrations of similar processes in operation later.

But before entering on the examination of that earlier evidence, it will be well to take stock, if only in a very elementary way, of the natural history, the physical surroundings, the geographical controls, of the cradle-land region within which the Greeks came into being at all; in the struggle to exploit and enjoy which they became themselves Greek, in the sense in which they are so in subsequent history.

CHAPTER I

Common Abode: Evidence from Regional Environment

The Mediterranean region—that is to say the "great lakes" of the Old World and the lands which surround them—has an obvious but superficial likeness to the lake region of North America. But these regions differ profoundly both in structure and in geographical configuration. Whereas the New World lake-land is itself comparatively featureless—a group of mere pools on an ice-worn and débris-strewn lowland—and is separated from the Atlantic seaboard of the continent by the Appalachian mountain zone, running roughly parallel with the coast and broken only by the long gorge of the Saint Lawrence and by the land avenue of the Hudson and Mohawk valleys, the Mediterranean region, in the geographer's use of the term, is traversed diagonally by a complex system of up-folded and contorted mountains; first, the Pyrenees and the Atlas ranges, then the Alps and Apennines, then the sinuous Carpathian and Balkan ridge, continued (after an interval) in the Crimea and the Caucasus, and escorted to the southward by the convex Dinaric arc east of the Adriatic and south of the Greek Archipelago, and by the Tauric arc from the south coast of Asia Minor to Armenia; whence the ranges of northern and southwestern Persia diverge again to enclose plateaus similar to those of Asia Minor and central Spain, but on a far larger scale and in a climate too dry to maintain as a lake-land their salt-strewn desert heart.

With this transverse Mountain-zone, the principal basins of the lake-land are related in very different ways. The Western Mediterranean lies wholly embraced by its folded ranges, with steep coasts formed by their foothills. Here

therefore it was possible for a Carthaginian empire on the African shore to confront the Greek settlements spread from Sicily and South Italy to Provence and the mouth of the Ebro, and eventually to come to mortal combat with the Roman masters of its European coasts. The Black Sea and the Caspian lie partly within, partly outside the highland, and owe much of their historical interest to the fact that their northern waters merely overflow sections of the great northern flat-land, the Eurasian steppe. The Eastern Mediterranean lies wholly outside the Mountain-zone, and, conversely, though the Phoenician cities along its abrupt east coast found their own "new world" among the coastward spurs of the Atlas ranges which limit this basin on the west, there was no rival culture on the long featureless foreshore of Libya to challenge the spread of the Greeks along the mountainous northern shores, and their eventual domination of the Tripolis as well as of Cyrene.

The Ægean Depression

But whereas all these greater basins, and also the long trough of the Adriatic, sunk between the rear flank of the Apennines and the steep forefront of Dalmatia and Albania, have been shaped by earth-movements of thrust and wrench, the Greek Archipelago, like the long rift of the Red Sea, results mainly from subsequent relaxation, fracture, and collapse. In the Red Sea, this effected only the severance of the Arabian slab from the main continental pavement of Africa, and the slight tilting of this slab, as a whole, away from the Mediterranean, so that it slopes from its high edge in the Lebanon and the Palestinian moorland, into the waterlogged pool which is the Persian Gulf. But in the region which was to become the cradle and nursery of the Greeks, it is the Mountain-zone itself which has been shattered, dislocated, and let down for about half its total height. The submergence is deepest in the south where the

mountains of Crete, Carpathos, and Rhodes are all that remains of the marginal ridges, and the plateau next west of those of Asia Minor lie below some seven thousand feet of sea. Farther north, the Cycladic islands, emerging round the greater peaks of Naxos and Paros, outline rather more clearly another sunken range which reaches the surface in Euboea and Attica westward and in Samos and the promontory of Mycale on the coast of Asia Minor; dividing the whole Ægean depression into a "Cretan" and a "Thracian" sea. Farther north again, the submergence is not so great; the Thessalian Olympus rises to ten thousand feet, and its Mysian brother to nearly eight, against eight thousand in Cretan Ida, and peaks of less than seven thousand in Rhodes and the Morea. Finally, the Sea of Marmora is another lake-land, connecting the Ægean with the Pontic basin through the flooded river-valley of the Dardanelles, and that outworn Niagara, the Bosporus gorge. Neither of these channels is wide or swift enough to be impassable, and consequently the continental masses of Asia Minor, and that "Europa Minor" which politicians persist in calling the Balkan Peninsula, are here joined by an easy causeway, which has been the path of many peoples, as we shall see, and in both directions.

But though the shattered highland rises rather suddenly above sea level along the steep coast of western Thrace, and repeats its promontory outlines in Mount Athos and the Chalcidic foreshore of Macedonia, it retains its cross-fractured and collapsed configuration as far north as the Danube valley, in a meshwork of steep ridges with a number of lower plateau between them. These, like Thessaly and the heart of Asia Minor, are only saved from being lake-land by the subsequent sculpture of deep drainage channels; some discharging the rainfall into the Ægean; some through the Balkan range into the lower Danube, opening narrow but quite passable avenues into the highland, from the Rou-

manian lobe of the great steppe; some again running northwestward into the middle Danube, and accentuating the facility of access offered by the corridor of broken land between the rugged Albanian mountains and the steep Carpathian-Balkan range, for intercourse between the Ægean and the Hungarian plain.

In the Ægean then we have a natural region of very unusual type. It is not a mere foreshore and continuation either of Asia Minor or of southeastern Europe, however gradually the highland structure of both sinks downward into it. Nor is it, like the Adriatic, a mere gulf of the eastern Mediterranean, for it is not open water but island-strewn, interrupted by long promontories, and screened from the "great surge of the sea" to the south by the long breakwater of Crete. Still less is it an open strait for passage between the Mediterranean and the Black Sea; the communication through the Marmara region is precarious, almost accidental. It is on the other hand a coherent and well characterized region, with peculiar land-forms, climate, and human régime; a highland, deeply sculptured into peaks and gorges, and then half-submerged, so that all terrestrial activities are restricted to its most rugged districts, while the broad lowlands lie drowned, down its gulfs, and consequently all human enterprises are restricted to minute isolated patches of softer rock and alluvial débris, scattered like oases within a desert of rugged rock. And this desert is all the more barren because much of the surface is limestone, soluble and porous, so that much of the rainfall is lost at once in swallow-holes and reaches sea level underground, or emerges in coast swamps like that of Lerna.

The effects of these principal characteristics of the structure of Greek lands, on the fortunes of all human societies which occupy them, are obvious. In the first place, the habitable areas of a mountain region of this kind are uni-

formly small, mostly enclosed valleys or heads of gulfs, half-submerged, half-choked with cultivable silt. They are also isolated from each other by rugged and inhospitable uplands; intercourse between their occupants is restricted, and local differentiation inevitable.

On the other hand, such traffic as is attempted is concentrated along a few well-defined routes through mountain passes, and under these circumstances any community which has the good fortune to command, in a military sense, the access to such a pass is clearly in a very strong position not only for controlling intercourse between its neighbors on either side, but for making their commerce a source of great profit to itself. This is perhaps most clearly seen in the medieval principalities established in Greece by Frankish and other West European invaders[1]: perhaps also in the fortified settlements of Minoan exploiters of the Greek mainland, especially at Mycenae, which commands the passes leading from the plain of Argos and Tiryns to the northern foreshores on either side of the Isthmus of Corinth. The acropolis of Athens similarly commands all routes inland from the hospitable open beach at Phalerum; and Orchomenus, the convergent roads into northern and western Greece from the Isthmus, Attica, and the Euboean channel. But while land communications, even along the coast, are so difficult, the sea is ubiquitous, running up the long drowned valleys far into the hill-country, or filling open roadsteads with shingle beaches where small vessels may be drawn up on shore. Whenever the seas are safe, the settlements spread down to the water's edge from under the shelter of the old hill fort; but when there is anarchy, and pirates are everywhere, they shrink away to a safe distance up the hillside, and sometimes stay there long after security returns, if the resources of the countryside are adequate. Here is a nursery for navigators; an archipelago where many similar communities may sharpen their wits on each other's needs, and

develop competitive arts and industries according to their special resources. And these vary greatly, in a region so complicated in its geological structure; marble here, emery there, obsidian, pumice, trachyte, and basalt for millstones elsewhere, besides occasional veins of metallic ores. Some of the non-metallic minerals, such as the obsidian of Melos, a natural glass, flaking keen as a razor, perhaps also the emery of Naxos, for grinding and polishing, were already being exploited in the Stone Age.[2] Moreover, whereas Europe north and west of the Mountain-zone is for the most part ice-worn, like the corresponding regions of North America, and has its lowlands smothered either by its own ice-borne débris, or by wind-driven loess-dust derived therefrom, the Mediterranean's "pluvial" equivalent of our "glacial" age stripped it of superficial deposits of all kinds, except where the forest belt, which gradually enveloped it from the southeast and southwest, as the climate became milder, formed and precariously conserved its own vegetable mold. We have to picture the primitive Ægean—before man began to devastate it and the highlands which enclose it, and as we still see it in the less exploited and better watered regions—as densely forested from snow-line almost to sea level, where alluvial fenlands were beginning to choke the gulf-heads; and we have also to attribute mainly to human agency, and most of all to man's worst servant, the omnivorous goat, the general deforestation which had begun before the great days of Greece in the more densely populated regions, and has replaced trees by evergreen scrub almost everywhere between classical times and our own. In the Bronze-Age "palaces" of Crete, the diameters of beams of the native cypress range up to sixteen inches[3]: now, only in the remotest highlands are there stunted and scattered remnants of such timber-trees at all.

To the steep gradients—and consequent close association, on the same valley side, of alpine pasture, timber belt,

scrub-land, arable and fenland, with fisheries and sponge-grounds where the same slope passes below sea level—is due the characteristic and unusual combination of food-quests which is the economic foundation of all human societies in Greek lands. Pasture for sheep and goats uphill, and for horned cattle in fenland and reed-brake behind the beach, grain crops and vineyards on the valley bottom, rising, on the recent marls and pluvial débris of the foothills, to terrace cultivation of deep-rooted evergreen like the olive and carob, and soft-fruited trees—vine, fig, mulberry, and the like—on the steeper slopes wherever there is enough moisture in the subsoil. This combination of food-quests, characteristic of the Ægean, is not however by any means, confined to it.

Mediterranean Climate

It is indeed remarkable how uniform is the plant-covering of Mediterranean lands, over more than two thousand miles from east to west. The reason for this is the marked uniformity of the climate, and the characteristic sequence of its seasons. And these peculiarities in turn result partly from the geographical position of the whole region, partly from the fact that it is large enough and sufficiently coherent to have a type of weather of its own.

If this section of the earth's surface were all sea, like the Atlantic Ocean west of it, the northeast trade-winds would blow all the year round, whereas actually they are only perceptible as one factor in the "etesian wind" of the navigator's summer. If it were all land, like the Persian plateau, which long ago was part of it, it would have the intense winter cold with out-draught, and summer heat with in-draught, which characterizes all continental regions; and the summer in-draught of Arabia and Saharan Africa is the principal factor which transforms the Atlantic trade-wind into the "etesian wind" of the Mediterranean.

But the Mediterranean is actually a lake region, deeply imbedded among continental land masses, and intersected by plateaus and ranges lofty enough to catch winter snow and much summer rain. Its volume of water is large enough to maintain an almost constant temperature; it consequently serves as a gigantic hot-water-apparatus in winter, and in summer as a refrigerator, for its coast-lands, which have accordingly a far more uniform temperature than would otherwise accord with their inland situation. Its winter régime moreover is determined by the warm moist currents of air eddying off the water surface along the maritime districts; discharging rain and snow on the coast ranges, but alternating these cyclonic storms with frequent spells of the bright sunshine which has made the fortune of Mediterranean health resorts.

In the West Mediterranean, which is nearer to the Atlantic, this rainy winter lasts longer than farther east: in Pontus too, which is far enough north to be affected by the rain-bearing "westerlies," it lasts longer than in the Levant. Most typical of Mediterranean conditions, on the other hand, is the climate of the South Ægean, and the converging coasts of Greece, Italy, and Sicily, as far north as the strait of Otranto; and even farther north than this, the water temperature of the Adriatic Gulf reinforces the effects of the Tyrrhenian Sea, and spreads truly "Mediterranean" weather over Italy up to the Apennines. No wonder that Herodotus characterizes the Greeks of Ionia as enjoying a climate which for him was ideal just because it was a mean between extremes. "They chance to have set their cities in the fairest spot of all men we know, for sky and seasons. For neither do the districts up-country do the same as Ionia, nor those to seaward, nor those to the east or to the west: some oppressed by cold and wet, others by heat and drought."[4]

Once again we must take note of the effect of these high ridges everywhere, in furnishing the valleys and plains with deep alluvial soil, and also with a far more copious supply of water locally than the climatic average would lead us to expect. This effect is strongest in Greek lands, where the clear air makes radiation rapid, and causes not only mist and rain on the high grounds far on into the dry summer season, but also copious dews at morning and evening nearly all the year round. Thus while the best and richest land is almost invariably near sea level, lining and choking the heads of land-locked gulfs and half-submerged valleys, especially since the devastation of the highland forests; the higher ground also, barren and rain-swept as it usually is, is yet able to maintain, in many places, a sufficiently continuous covering of dry and hardy shrubs and bushes to furnish pasture for goats, and livelihood for shepherd folk, almost up to the snow-line.

But though there are local variations, the "Mediterranean" type of climate is found almost universally throughout the coast-lands, and sometimes also for considerable distances inland, as in Ionia, and still more markedly in North Syria as far east as the Euphrates. Its distribution is graphically illustrated by that of the cultivated olive, supplemented by the modern acclimatization of orange and lemon from southeastern Asia.

The sequence of "Mediterranean" seasons may best be described in terms of their divergence from the trade-wind and monsoon types with which we began by contrasting them. In autumn, the strong, steady, cool but dry north wind fails gradually as Sahara begins to cool; the westerlies shift southward over Europe, and the store of summer warmth in the Mediterranean water sets up moist atmospheric eddies, which bring the first clouds over the mountains and into morning and evening sky. About the equinox, long

calms and misty weather are succeeded by the early rains; but the same water-warmth postpones the onset of winter till November, when you may still bathe safely; though spring bathing is perilous till June. The rainy season lasts till April, its cyclones seldom lasting as long as a week, and allowing brilliant days betweenwhiles. There are snowfalls occasionally and locally in January and February, and longer spells of sunny, dry weather, as the north wind begins again. The "latter rain" of April and early May is precarious; on the other hand, there may be disastrous hailstorms, with thunder, far on into the growing season. But by May the cyclones become rarer and less violent, though in the western basin "black Auster" may loom up from the southwest, sultry and rain-laden, as late as June. By this time, however, even the dews diminish, except on the African shore where the north wind is sea-borne as well as cool. The Pontic shore of Asia Minor owes its copious summer rains to similar but intenser conditions, for here the north wind comes from wide water to high land, and sheds its moisture before swooping down dry and gusty onto the central plateau.

Mediterranean Vegetation

With this distribution of soils and climates in mind, it is easy to recognize and interpret the main varieties of Mediterranean vegetation. Limiting conditions, in Herodotean phrase, are on the one hand African and Arabian desert, too "hot and dry" for anything to grow without a supply of water from artesian springs, or perennial rivers traversing the dry belt. Where the minimum temperature is high enough, this is the zone of palms, and there is one small district on the sheltered south side of Crete where the date palm grows wild, perpetuating itself. Short of utter desert, there is the "hot steppe" with sparse evergreen shrubs heavily armed by spines and bitterness against camel, ass, and goat. But where rainfall rises above an annual average

of about ten inches, and the greater part of that moisture comes in the cool winter, evergreen scrub not only becomes denser and deeper, but is supplemented by three other types of plant; bulbs and corms, like the dreary ubiquitous asphodel, which sleep through the heat; winter-growing annuals with their brilliant spring flowers fading early to become "dust before the wind," leaving only hard dry seeds to sleep till autumn rain wakes them; and grasses, propagated both by seed and by creeping roots, ranging from mere herbage to those "nobler grasses" which bear nutritious "grain," and include wild oats, wild barley, and wild wheat, ancestral to the cultivated "cereals."

At about twenty-five inches of rainfall, and again with the proviso that most of the moisture comes in the cooler season, deciduous shrubs, and trees bearing soft fruit or nuts, begin to compete with aromatic evergreens, and permanent pasture covers the deeper soil and smothers the drought-loving bulbs and annuals. With the appearance of snow—still more, of prolonged frost—the conifers gain rapidly on the deciduous trees; and by their dense foliage overlay the turf and other undergrowth.[5] And at last, in the coldest, wettest, and bleakest situations, alpine pasture and sessile evergreens among the peaks, and "cold steppe" with dwarf birch and short-lived summer-flowering annuals, outlast even the pines; to fade out in their turn among rock débris and frozen mud respectively. Of all this sequence, from heat to cold intolerable, every phase is to be found in some part or other of the Mediterranean; snow-flecked rock with lichens and mosses on the summits of Ida, Parnassus, and Olympus; sand desert within sound of the surf, around the Greater Quicksands.

Plant distribution, depending here as elsewhere directly on light, heat, and moisture, changes as the supply of these changes, with altitude, aspect, and exposure to winds; and varies also in detail with the quality of the soil, the presence

or absence of lime, potash, and other mineral matters. It has been terribly modified, too, by the devastations of man, and man's disastrous satellite, the goat; indeed the present immense extent of the most characteristic of Mediterranean plant associations, the *maquis* or evergreen scrub, is very likely due to this devastation mainly, in classical times and later.

It is in this evergreen scrub, however, which most closely accords with the climatic régime of the region, that Mediterranean man is most completely at home, and from it that he has won his most notable auxiliaries. It has few large or dangerous animals; wild goat and wild sheep are in their own element here; and some of its most characteristic shrubs and evergreen trees, such as olive and carob, and other deep-rooted trees with summer fruits, like the vine and the fig, have been improved into valuable orchard-stock. Many of the bulbs are edible, "the leeks, the garlics, and the onions" which Israel remembered with the "fleshpots of Egypt"; many of the dry tough-leaved scrub plants themselves are aromatic—thyme, sage, rosemary, lavender, bay, myrtle—; the gourd-bearing cucumbers and water-melons belong to the margin between scrub and fen; apple, cherry, and plum, walnut and Spanish chestnut, to the outskirts of deciduous forest; and the "cereal" grasses, to the desert margin.

Economic Effects of Ægean Régime

Combining these indigenous resources, improving their quality by selection of the best strains, or by grafting more edible varieties on hardy local stocks, and adding, in time, oxen and horses—both however rather as sources of power than of meat or even milk products, for which sheep and goat suffice—man has achieved a food-quest[6] and therewith an elementary exploitation of this Mediterranean régime which limits him, indeed, rather strictly by some of its more special features, such as the habitual use of oil and wine, but for the

same reason has enabled him to extend his settlements over very widespread regions, just because this Mediterranean plant-régime is as widely and uniformly distributed as is the climate which determines its composition. So closely adjusted is this elementary régime to the geographical conditions, that very little change can be detected in it, from the farback moments when ox and horse were introduced as sources of power, for ploughing and transport respectively, and when the knowledge of navigation made it possible for man to extend his exploitation to the Cyclades and Crete, down to the present day. Even steam transport has only renewed and intensified that competition between home-grown and imported cereals which was established long ago by Pontic, Sicilian, and Alexandrian corn-ships, and has led once again to that intensive cultivation of the same indigenous tree-crops, olive, vine, fig, as in the days of Solon; the destination of this produce, as of those later arrivals, orange, lemon, carob, tobacco, cotton, being now, as in the days of Herodotus, lands lying within reach of the culture of the Mediterranean, but beyond its climatic region, and either too dry, like Egypt, or too cold, like Scythia, to produce these foodstuffs for themselves.

And not only have modes of competition and specialization been identical in classical and in modern times, and in the medieval periods when Constantinople, Alexandria, Venice, and Genoa were insatiate consumers, or at all events purchasers, of Mediterranean produce. The same process and some of the same results are already recognizable within the Minoan exploitation which preceded the Hellenic. Staple produce of Cnossus and its dependencies was certainly olive oil, perhaps also wine, though the evidence for the latter is not so clear; and the distribution of Minoan settlements outside their Ægean home land, so far as it is made out at present, presents some notable analogies, especially in the west, with that of the Greek colonies, five cen-

turies later; though it did not go so far afield as they. It is not possible yet to be sure whether Cnossus or other Minoan centers imported cereals, as Athens and Corinth did, still less to determine where those crops were grown. Probably the trade with Egypt in articles of luxury and craftsmanship is but a symptom of far more voluminous dealings in consumable necessaries.

One other series of settlements, and enhancement of human control over regional resources, must be noted briefly here. Even the Hellenic *polis*, intimately adapted as it was to what we have found to be the most typically Mediterranean conditions, did not complete its exploitation of them. This was in part due, as has been hinted already, to fateful collision with a powerful alien organization, the Persian Empire foreclosing all eastern shores; partly to the rivalry of similarly constructed societies, the Punic and Etruscan cities. But in part also it may be ascribed to the difficulties encountered by the citizens of a *polis* in exercising that direct personal control over their public affairs which was characteristic of these states, under climatic conditions differing, even so slightly as those of Italy, Provence, and Spain, from those of the eastern Mediterranean. The sudden halt of Greek colonization just within the entrance of the Adriatic is an instance of this correlation of pluvial and political régime. Another is the lack of Greek settlements on the Pontic coast of the Caucasus.

It is all the more notable therefore that the type of community which eventually took up the task that had been found too difficult for the colonizing Greeks, and became the standard instrument for the spread of Mediterranean—and, in essentials, of Hellenic civilization—to the Atlantic seaboard and far into the middle and lower basins of the Danube, differs politically from its precursor precisely in this point, that its public affairs were administered not by a mass-meeting, or by any general assembly of a privileged

class, but by an executive of officials and professional public servants, supplemented at most by a town council of very moderate size; and differs in its distribution, in that it occupies regions with an annual rainfall, and a liability to rainstorms at almost any season of the year, which made any kind of direct government impracticable. Such squalls explain the political influence, even so far south as Latium, of any "clerk of the weather" who could opportunely "see lightning" and bring public business to a standstill.

Restricted thus to settlements of small dimensions, in isolated areas of exploitation, with mainly sea-borne intercourse, the Greek cradle-land has always been liable to overcrowding, and consequently to spasms of emigration. These movements have been in two main directions: from the austerer highlands of the interior into the maritime districts, more especially in periods of colder and wetter climate, when the grain crops, always precarious there, are most liable to fail; and from the coast plains, coastwise, as far as similar conditions of life were found to prevail. And we have already noted how so large a body of water as the lake region, and especially the eastern Mediterranean, contains distributed a very uniform climate, for a few miles back from the shore, over some two thousand miles of coast, between the lowland of Philistia and the Atlantic strait, and from the Riviera to Tunis. Even the North Ægean, more deeply land-locked between large continental masses, has this maritime climate in essentials, and the spread of Greek settlements throughout the Marmara region, and far along the shores of the Black Sea, results from the same moderating effect of that lake basin, notwithstanding its more northerly latitude. It is indeed only where exceptional rainfall, due to the drift of Mediterranean moisture onto steep, lofty coast ranges, made the open-air habits of Greek life and direct self-government by mass-meeting impracticable, that there are Greekless regions; east of the Adriatic, for example, and on parts of the south coast of Asia Minor.

Local Variants and Marginal Regions

It will be evident from the structure of the country, and especially from its altitudes, that there is progressive replacement, northwestward as well as uphill, of evergreen scrub by live oak, boxwood, laurel, and of these by deciduous oak, chestnut, and walnut. A hay crop is cut now as far south as Macedonia, but not in Thessaly; sloe gin and cherry brandy, which keep out cold as well as wet, replace brandy and mulberry spirit very near the boundary between Slav speech and Greek. To the northeast, on the other hand, and especially in Thrace, where the land is lower (apart from Mount Rhodope), the climate is more continental, and there is wide prairie round Adrianople, and much of the *Deliorman*, the "Mad Wood" between this and the Black Sea is the blasted heath that its name implies. The Marmara region too is bleak open country far into the foothills of Ida and Mysian Olympus. South of these wind-screens, warmth, moisture, and fertility increase, and the great open valleys of Lydia, and still more the Ionian section of the coast, had the pick of the world's climates and soils, as Herodotus knew.[7] During classical times, and since, the denuded earth from what was forested highland has deranged the rivers and thrown their mouths forward ten or twelve miles in malarious delta-fens. But south of the Maeander valley, patches of forest are left even now, and a large "wood-cutter" population, the Tachtajis, secluded, exclusive, and primitive, pursues its craft all over Lycia. The southern half of Rhodes, too, has much woodland still.

These are but glimpses of an ancient world, sadly frayed and scarred by man's long use, still more by flagrant abuse of it, in his worst fits of self-seeking. Whether Greek lands can ever recover, until another deluge clothes them with fresh sediment, and "all things are made new" as the ancients dreamed, is uncertain, though fifty years of sane forestry in Cyprus, and five of mere goatlessness in a small

"proclaimed" district of Leros, give unforeseen encouragement.[8] And this devastation had begun early. In Attica it was widespread in the fourth century,[9] when Plato graphically compared the country to a decayed carcass "with the bones sticking out through the skin." The parable of the sower, with its "stony ground" side by side with "thorns" and "good soil," illustrates the same state of things in Palestine.

Periodic Variations of Climate

Under favorable circumstances, terrace cultivation extends the fertile area, and as long as this expansion is maintained, population grows commensurately, producing at first all things needful in every district, but later increasing the value of the yield by concentration on the most remunerative crops; oil or wine in the sheltered valley states, and grain crops especially in the remoter colonies on flat-land foreshores; the surplus of the home crops being exchanged for what is lacking here but grown abundantly elsewhere. Athena's gift of the olive tree was indeed "the best gift" for Attica; but Metapontum set Demeter's corn-ear, and Locri its barleycorn, on its coins as the city's badge. In a few states, Poseidon's gift of the horse made it possible to exploit ranch land, too dry for grain crops, at Argos, in Boeotia and Thessaly, and at Tarentum; and this too is reflected in the coin-types, though later only in memory of old times. More commonly we have the bull, or the cow-and-calf, for these can graze in hillier and shrubbier ground, and need less space for exercise. When conditions are at their best, olives, cow's milk, and sheep-butter reduce the demand for goat-cheese, and the importance as well as the range of the goat-keepers. In Homer's Ithaca, the faithful servant was the swineherd, the goatherd was the villain of the story, and we infer "optimum climate" for the Heroic Age, at all events in western Greece; Laertes, too, was pruning pears that he had planted for the boy Odysseus;

and Penelope's tears were "like the thaw, after snow on a west wind."[10] The offset to such conditions in the lowlands and coast districts was that the high pastures were snow-swept and the uplands uncultivable. The Phaeacians, for example, had come down to a new site at sea level in the days of the father of Alcinous.[11] Here they grew all kinds of fruit trees under irrigation; but the "up country" that they had left, like some of the coast ranges, was haunted by their old neighbors the "round-eyed" folk; pastoral at best, but unsocial cave-dwellers, with neither crops, vineyards, nor manners: for a Cyclops would turn cannibal on small provocation, and was an ill carrier of good liquor. There was obviously a risk too, lest better men than the Cyclops folk should be drowned out of the hills, at a climax of rainfall, just as the grassland folk are driven by drought into better-watered countries; a point which must be kept in mind when we consider alternative causes for immigration into Greek lands.[12]

But the Mediterranean is not always at a climax of fertility; nor are the surrounding regions. And when fertility has declined, overpopulation ensues, and migration to relieve this; resulting in oversea colonization by the people already there, and invasion overland from without; the Cimmerian inroads of the seventh century B.C., during the great colonization, are an example. At the worst, under either peril, irrigation is impracticable, cultivation shrinks downhill, anti-social shepherds and goatherds range with less restriction, reducing woodland and fruit land alike to the "thorns" and "stony ground" of the parable. In modern Greece, the limit of olive culture lies very close to the range of the nomad Vlachs; on the other hand, the Serbian pig-keeping, which presumes oak woods, sets a northward as well as rainward limit to these and other goatherds, "wild, seditious, rambling" like their "living fields."[13]

Summary of Fundamental Economic Relations

These, then, are the fundamental economic relations between Man and Nature, in the Mediterranean, and especially in the Ægean world: geographic controls over every solution proposed there to the problem of "living well." To these Ægean society reverts in each successive period of quiescence, acquiring experience and leisure and, through observation, experiment, and reflection, attaining to some degree of understanding. On these, in periods of greatest fertility—that is, of maximum rainfall—societies are built up, necessarily of small size, enforcing intimate acquaintance between close neighbors of similar descent, breeding, and occupations; similar in their political structure, and social habits, but infinitely diverse in the local niceties of speech, belief, and conduct, and obstinately loyal to local usage. Complete preparedness for instant defense against raiders was but the necessary outer-guard to sturdy insistent husbandry whenever there was any work to do: though normally, while only a barbarian would "make war in the winter," only a fool would make it after the enemy had gathered his crops. There was a "time to be silent" in politics too, among sensible people: the best government ever enjoyed by Miletus was that of the quiet men who had not only kept their own farms tidy during civil disturbances, but had avoided having them raided by the other fellows.[14]

The Ægean in Relation with Neighboring Regions

It will be seen at once from the general trend of the mountain structure, that the coasts of the Ægean Sea fall apart into two distinct groups, standing in quite different relations to the regions behind them. On the south, and also on the east, Ægean coasts are but a semblance of mainland, a fringing screen of narrow drowned ridges or mere islands. Even at its widest the peninsula which forms the modern Greek kingdom can be crossed on foot in three or

four days. Beyond these islands or peninsulas there lies only the open basin of the East Mediterranean, devoid of islands, and its farther side is the only really inhospitable shore in the whole lake-land, the northern coast of Africa, from Egypt to Tunis, particularly shrubless and barren, and further defended against human approach, from the sea by shifting sand banks, and from the land by more stretches of sand drifting above water level. Thus the river valleys of Crete, and the eastern coasts of Greece, insignificant and impracticable as they are, have the further disqualification that the paths up them literally lead nowhere, except to equally minute downward valleys and strips of coast plain fringing the outer face of a broken breakwater.

Contrast, with this, the appearance alike of the eastern and the northern shores of the archipelago. Both are the frontages of considerable land masses, Asia Minor, and the broad trunk of Minor Europe. In both alike, except in Thracian Rhodope, the principal highland stands well back from the sea front, and its spurs intersect the coast line either obliquely, or even at right angles, instead of escorting it in parallel fashion as do most of the mountain ranges of Greece and Crete. Further, between these spurs of highland, both the eastern and the northern shores offer large lowland valleys, copiously watered by rivers of considerable length and comparatively gentle grade. The valley roads which follow the course of the streams are consequently easy to ascend, and the passes to which they lead offer no serious difficulty to the passage of caravans or armies. Even beyond the watershed the same favorable conditions are continued. The headwaters of the greater rivers of Macedonia and Thrace interlock, on high open moorlands, with those of considerable tributaries of the Danube, whose upper valleys form the prosperous inland regions of Bulgaria and Serbia, and prolong the valley roads already mentioned into

wide, fertile, and habitable regions of southeastern and central Europe, the Roumanian section of the Danube valley, and the great Hungarian plain about its middle course.

Similarly in Asia Minor the passes which stand above the headwaters of the Maeander and other Ægean-ward streams open out at once on their eastern side upon broad moors and grasslands stretching away from the foothills of the great marginal ranges of the peninsula. These moors and grasslands cover an immense extent of country in the heart of Asia Minor. It is only locally that the water supply derived from the inner faces of the surrounding chains is insufficient for the maintenance at all events of pasture for flocks, and in most districts there is sufficient moisture to secure, for their present population, an independent and sufficient corn supply. Even in antiquity, when the population appears to have been much larger, Phrygia had the reputation of having corn enough and to spare; in the days of Herodotus, this district was "the richest both in corn and in sheep, of all the countries of which I know."[15] Eastward, then, as well as northward, the Ægean basin adjoins great regions of ample natural resources, and great capacity for maintaining human population at a fair level of civilization; it is consequently from the east and from the north that Greek lands, in the narrower sense of this Ægean area, have been brought into the closest and most vital relations with their human neighbors outside.

But the influence which has been exerted by the Asiatic neighbors of the Ægean has differed wholly from that of the European. The peninsula of Asia Minor, lying as it does like a great promontory or pier-head, projecting westward from the main land mass of Asia, toward southeastern Europe, has from the earliest times served the purpose of a bridge of transit by which, first, the post-glacial flora and fauna of the Near East, then its indigenous breeds of man, eventually

the produce, the people, and the ideas of the Eastern Empires, could enter both the Greek world of the Ægean, and also the younger world of central and northern Europe on the flank of which it lay. The function of the northern mainland was different: some few raw materials indeed it had to offer, like the tin of the Carpathians and Bohemia, and amber from the Baltic coast; but its staple commodity was *men:* slave-men at all times, raided persistently, by Greek adventurers for example, to satisfy the clamorous labor-hunger of that ancient world; master-men at rarer intervals, when barbaric but unspoiled hordes of northern giant-folk poured in upon the weakling southron, and made his world their own. And on such occasions, with the men came some at least of their craftsmanship, customs, and beliefs.

Note further, here, how the Ægean is not only an intimate mixture of Mediterranean and highland, and lies in close proximity to important prairie flat-lands on the north; but also how central its position is in regard to the Mediterranean basins as a whole; how it controls great stretches of coast-land, and commands also (as we have seen) many avenues of approach from oversea to the highlands, and of transit across them. Note again how it commands and controls these facilities without serious rival. Since the eastern Mediterranean, unlike the western, lies quite clear of the mountain zone, Greece has no rival to fear on the south side; no African state to contest its supremacy, as Carthage, with somewhat similar geographical advantages in the western basin, could and did contest that of Rome. Egypt lies entrenched so deeply behind its delta screen, that it very rarely aspired to sea-power at all. Cyrene is a mere island, washed by sand waves on the south instead of water, but insulated none the less, and devoid of significant background. Even Phoenicia, with all its genius for persistent exploitation, lay but skin-deep between the surf and the cedars.

I have dwelt at some length on these purely geographical features of the Ægean and its neighborhood, partly to correct, if that be necessary, misconceptions suggested by the too limited and special maps of the Greek world which are commonly in use: partly because as we are beginning to see, the question, *who are the Greeks*, is at bottom a geographical problem in which interaction among human agencies has been rigidly directed and restricted by non-human factors of a peculiar and rather complicated kind.

Invasion and Colonization: Their Respective Causes and Effects

Now, down to this point, geographical and economic considerations have hardly given occasion to raise the question, what kinds of men inhabited this precarious paradise; still less whether, for example, the description of the neighbors of the Phaeacians as "round-eyed" meant more to the poet than the distinction between "nut-eating" and "meal-fed" men, or between men "who divide their speech" into words you can recognize, and those who just "babble," like the Carians, or go into battle, as the Trojans did, with the screaming of cranes.[16]

But as there is no question that, whatever may have been happening in ancient times or in prehistoric ages, there have been notable displacements historically not only of nationalities and peoples, but even of racial breeds, around and within the Greek cradle-land, it becomes evident that we must be prepared for such redistributions, and at all events for contact and intercourse between people within the Ægean region and people on its borders and beyond them. Though Greek lands, under Providence, have never ceased to be Greek since they first became so—and the fairest and most ill-fated of them only ceased to be Greek, after just three

thousand years, through the catastrophe of 1922—even the Greeks themselves made no claim that they had been so always.

And as there are various kinds of men, still more various have been the modes of life habitual to those who have found their way from other regions onto Mediterranean coasts; and the distribution of this or that mode of life and type of culture does not always coincide with that of distinct breeds and strains. Further, the barriers set by specialized modes of speech—as potent to separate men who do not understand each other, as to bind together those who do, and share the same inheritance of ideas and beliefs—do not always coincide with the limits either of culture or of race. Speaking of the bald-headed Argippaei who dwell on the far side of Scythia, and eat plum cake, Herodotus characterizes them by a series of such contrasts, as "snub-nosed and long-bearded," and in this respect not peculiar, "speaking *however* a language of their own, *yet* wearing Scythian dress, *but* making their living off fruit trees"—which of course no Scythian could do, for sheer lack of trees on his grassland.[17]

Yet it is the same Herodotus who first formulated the criteria of common nationality, with which we began, in terms which modern ethnology hardly needs to amend. Common descent, common speech, common beliefs, and common culture, are for him the bonds which make a people one.[18] These are however obviously separate criteria of national unity, and must be examined independently, and by the scientific method appropriate to each. Common descent is a problem of comparative anatomy; common language, of philology; common beliefs and ritual, of folk-lore and mythology; common customs in daily life, of archaeology, or (where that fails) of the comparative study of archaic institutions. Each of these enquiries however may, and (as I hope to show) does occasionally help one or more of the others. But while all contribute to the criticism

and elucidation of the Greeks' own folk-memory, it may be from that folk-memory itself that some of the most helpful clues are to come, for connecting coherently the results of these separate researches.

Next, then, after this survey of the geographical scene, this remarkable cradle-land of the Greek people, we come to the question, what varieties and breeds of men have attempted to make themselves at home in it.

CHAPTER II

Common Descent: Evidence from Physical Anthropology

From our review of the geographical features of the Greek cradle-land it is clear, first, that the Ægean archipelago consists of a shattered and foundered section of the Alpine-Anatolian Mountain-zone which was once continuous highland; then, that it has still a practically continuous continental land-bridge through the Marmara region; but further, that its subsidence has been sufficient to give free access to it by sea, east and west of Crete, from the main East-Mediterranean basin, and also to provide land avenues into it both from the Roumanian extremity of the Eurasian flatland, and also from the Hungarian plain within the great Carpathian arc. It is therefore to be expected that the Ægean should have received from time to time contributions to its human population from each of these distinct and contrasted regions.

And this has in fact been its fate throughout historic times. To take only familiar instances: from the highlands on the European side have descended in medieval and modern times many small bodies of Albanian highlanders, very tenacious of their tribal organization, their simple mode of life, and their peculiar language. From the interior of Asia Minor have come nomad-pastoral Turkish-speaking Moslem folk, interpenetrating the sedentary, agricultural, Greek-speaking Christians who continued to occupy much of the cultivable lowland from classical times till their extermination between 1914 and 1923. By the seaways, Romans in classical times, Franks of all sorts in the Crusading period,

Saracens of Arabia and North Africa, modern Maltese and Italians, have infested the coasts and occupied the ports with a mixed "Levantine" population, from which it is still fairly easy to distinguish the purer-bred Greek peasants and fishermen of the smaller islands, and the stalwart mountaineers of Crete. From the Roumanian plain, through the small plateaus and "gateless amphitheaters" of Thrace and Macedonia into the larger lowlands of Thessaly, central Greece, and even farther south, the nomad-pastoral Vlachs are traceable by their Rouman speech, their migratory (or rather, oscillatory) habit, their comparatively slender build, fair complexion, and lighter-colored hair and eyes. And from the middle Danube have come successive floods of Slav-speaking peoples, of various racial types and modes of life; some almost purely pastoral and migratory, but the majority in close-ordered village-communities of peasant cultivators, spreading less rapidly, but no less persistently and permanently, by mere natural increase and forward propagation of similarly organized groups. Add to these the tumultuary establishment in medieval Bulgaria of a horde of Finnish-speaking tribes from the woodlands along the upper Volga, and the conquest of the whole region by originally Mongoloid but utterly cross-bred Turks, in the fifteenth and sixteenth centuries, whose direct descendants only surrendered their last corn lands and cattle ranches in Thessaly and Macedonia after 1918;—the only wonder is that it is still possible to trace so clearly, among the modern population, elements which are none of the admixtures, but continuous in descent, as in language, from the Greeks of Byzantine and Hellenic times. Certainly it need not surprise us, if we find that the same avenues were open earlier still, and contributed their respective contingents to the making of a Greek people.

Modern Enquiry into Ancient Physical Types

Direct scientific study even of the modern population only began almost within living memory, and it was not till Schliemann's revolutionary discoveries of early settlements and tombs, and his lucky finds of a few human remains, that it was possible to supplement modern by ancient material.[1] Nicolucci in 1867 was dealing only with casual observations, Beddoe mainly with Greek sailors measured at Bristol and Cardiff. Zaborowski in 1881 recorded sixteen skulls "from a Greek tomb in Asia Minor"; Virchow and Weisbach in 1882 described Schliemann's Trojan individuals, all certainly prehistoric; and Bent in 1884 one skull from an early Bronze-Age grave in the island of Antiparos. In the same year, 1884, Klon Stephanos published the first general survey of ancient and modern material. While he regarded the ancient Greeks as essentially of a long-headed type like that of South Italy, he detected a distinct broad-headed variety, which he thought to be "Pelasgian," that is to say, pre-Hellenic; though he recognized that the heads of Greek statues had usually these broader proportions, and that this type was predominant among modern Greek-speaking people. But he printed no statistics, either in his first essay, or in his all-important note in 1905 on early skulls from the Cycladic islands. His large collection of Greek skulls of all periods still lies in Athens, awaiting exact description, though several well-qualified travelers have recorded their general impressions of its significance.[2]

Meanwhile in 1891 von Luschan's statistical account of 179 Greeks of Castelorizo and 13 Tachtaji highlanders, all from the same district of southwest Asia Minor, demonstrated the coexistence of two distinct types in a single well-secluded Greek community, and the identity of the broader-

headed of these types with the most indigenous section of the Moslem and Turkish-speaking population of this part of the mainland. He also noted one "very ancient" skull, of neolithic or early Bronze Age, from a cave at Limyra, of the same broad type, which confirmed his conclusion that this breed had been long established here: and the observations of Chantre in Cappadocia and Armenia proved this type to be characteristic of this Mountain-zone and its plateaus at all known periods. Only in the foothills overlooking the Mesopotamian lowland does it give place to a long-headed Kurdish type which merges in that of the Arabians, ancient and modern. Also in 1891, Neophytos published measurements of 180 Greeks from northwest Asia Minor, among whom the broader-headed type was predominant; and Virchow in 1893 took occasion of a fresh discovery of skulls of the fourth and third centuries at Athens to review the whole question of Greek racial types.[3]

Then theory broke loose, and controversy therewith. Sergi, overestimating the value, and still more the continuity of the evidence for intervening regions, asserted the identity of the long-headed occupants of early graves in South Russia with the "Mediterranean Race," of which it was his great merit to have shown the extent and coherence south of the Mountain-zone: he argued further, that if (as Zampa had claimed in 1886) this Mediterranean Race was aboriginal in the Ægean, and if it had spread through and beyond the Mountain-zone so early as the Russian evidence seemed to require, the occupation of the highlands by their actually very broad-headed population must be subsequent, and might be comparatively recent. This conclusion was at the time more tolerable, because the contrast in anatomical build between the "Alpine" and "Armenoid" type, and the Mongoloid types, which are also very broad-headed, had not yet been realized, nor the total contrast between these two breeds in respect of hair, complexion, and other sig-

nificant characters. Sergi's general conclusions were accepted by Ripley in 1900, and have been widely popularized since.[4]

Partly relying on Sergi's work on the "Mediterranean Race," but also influenced by Greek literary traditions (which had been discussed by Beddoe in 1893) and by far-reaching comparisons between certain features of early Greek culture and his own bold reconstructions in central European archaeology, Ridgeway in 1896 and more voluminously in 1901 formulated the theory that in the ancient Greek people, already generally admitted to be mixed, the slighter-built and darker-complexioned "Mediterranean" constituent was the aboriginal folk whom the Greeks described as "Pelasgian," and that the other was a gigantic blond breed, of northern origin, which he described sometimes as "Celtic," sometimes as "Teutonic." For the "Alpine" or "Armenoid" breed, broad-headed but not blond, he had no use, and disputed its very existence in Greek lands. How precarious these speculations were, is indicated by Ripley's failure in 1900 to find record of more than one hundred ancient Greek skulls at all; and as evidence for stature, not a single complete skeleton had yet been measured.[5]

Meanwhile, the discovery that in Crete lay the center and origin of the Bronze-Age culture, already revealed by Schliemann at Mycenae and Tiryns in peninsular Greece, made urgent the examination of the human remains which were being found in considerable numbers in tombs of several early periods. Following closely on the pioneer work of Sergi and Boyd Dawkins in 1900, came Duckworth's publication of 87 early Cretan skulls, in 1903, supplemented by very copious measurements of living Cretans by Duckworth and by Hawes from 1905 onward—the latter unfortunately not yet published in detail—and later by another series of modern Cretans measured by von Luschan in 1913.

Duckworth also examined a considerable number of skulls of various periods in Athenian Museums, and in the collection of Klon Stephanos; and Velde in 1912 published six early skulls from Leucas on the west coast of Greece. The

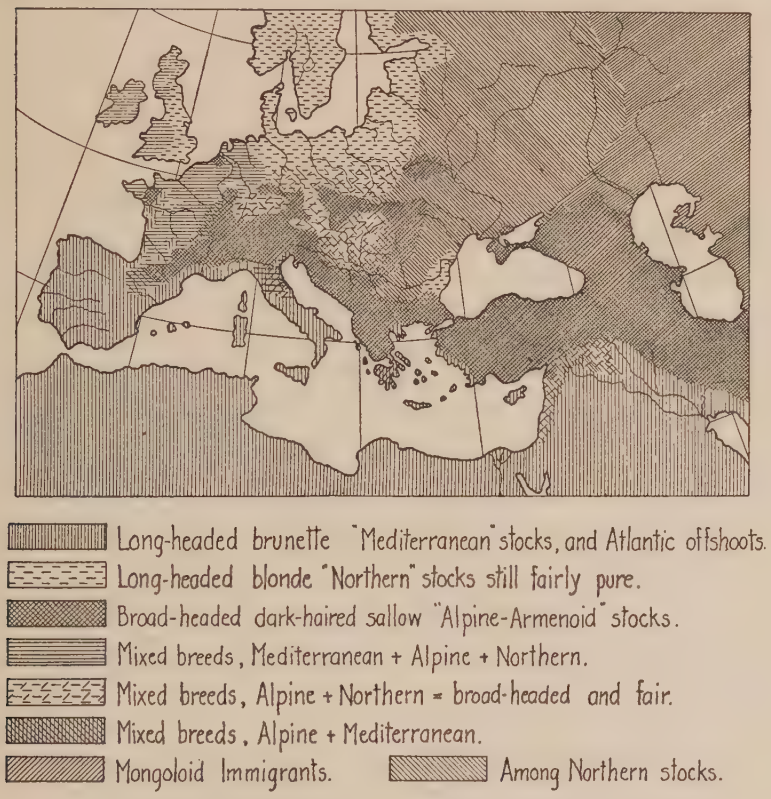


Fig. 1.—Principal Human Breeds and Blends of the Mediterranean and Adjacent Regions

general significance of the Cretan evidence was discussed by Myres in 1906, and Mosso in 1907. Lastly Buxton in 1920 published a considerable series of skulls from tombs of the Bronze Age in Cyprus, and full measurements of living adults and children from several villages in the eastern part of that island.[6]

Principal Human Types in Adjacent Regions

Scanty though the material still is for the study of the origins of this Ægean population, there has been sufficient general advance in our knowledge of the distribution of human varieties over the whole of this part of the world, to justify some provisional inferences from it. Clearly we are concerned with the interrelation of three main breeds, established respectively within the Mountain-zone itself, and in the wide flat-lands north and south of it; and in view of the peculiar geographical structure of the Ægean region, and of its subsequent history, we must be prepared to find in it, sooner or later, representatives of all three.

The "Mediterranean" Types

All through the southern flat-land, from the Atlantic seaboard of Morocco to the foothills of Persia and Armenia, the group of closely related types, commonly described as the "Mediterranean" or "Brown" race, extends with remarkable uniformity; separated from the Negro types of the Equatorial forest region by the broad barrier of the Sahara, and strongly contrasted with them in physical character. These "brown" types are of moderate stature, slight build, with small hands and feet; the head is long, narrow, and not very high, of oval outline, with oval face and upright profile, fairly narrow nose, brows level but not prominent, and oblong eye-sockets. The skin is translucent, but tans readily in sunlight to a warm brown; the eyes are dark, and the hair black, lustrous, and wavy. There is not much hair on the body, and the beard, thickest and longest on the chin and along the edge of the jaw, fades out low on the cheek: even on the upper lip the growth is neither dense nor long. Local varieties with lighter brown hair and gray eyes, commonest in the highlands of northwest Africa, may be due to local conditions, but it must be remembered that the Vandal

invasions in the fourth century A.D. brought a foreign fair-haired element into this region. Throughout this "brown" race, however, children are often less dark-haired than adults, and infants are sometimes very fair. If the hair is neglected or weather-beaten, it fades to a pale brown like old straw.

East of the Mediterranean these "brown" types extend as far as the foothills of the Mountain-zone, and occasionally among them: on the other hand, they have failed to establish themselves in the strip of high ground between the Jordan valley and the sea. In the West Mediterranean, there is easy access to the European shores at Gibraltar, and between Tunis and Sicily, where the Maltese islands are the remnant of a causeway which was nearly if not quite continuous in very recent geological periods. Consequently a population of North African origin is found occupying Italy up to the foothills of the Alps in the Later Stone Age: in Spain, and along the Atlantic seaboard, similar types spread widely as far as the British Isles. Greek colonists in the West Mediterranean recognized close affinity between the oldest element in the population of Sicily and of the Ebro valley; and their name for this "Iberian" element has been commonly used for the western group of "brown" types in general. Under Carthaginian rule, natives of North Africa and Spain seem to have understood each others' speech, and recognized each others' place names; and the Saracen conquest of Spain was as rapid and effective as it was, because its leaders were able to employ the rather less Romanized Moors against the rather more Romanized Iberians beyond the strait.

Between Sicily and Syria, however, the Libyan flat-land is separated from the abrupt southern face of the Mountain-zone by a wide expanse of water, stormy in winter, and swept by a steady north wind in summer; and at first sight this barrier of the eastern Mediterranean would seem to be impassable. How it was overcome, we must ask later.

The "Alpine" and "Armenoid" Types in the Mountain-zone

The Mountain-zone, too, has its characteristic breed of men. From the Pamirs and Hindu-Kush to Armenia and the Caucasus, and from Armenia to the Carpathians, the Alps, and the Auvergne, all its most rugged and inaccessible regions are the most completely occupied by a series of closely related types, to which the general names of "Alpine" and "Armenoid" are appropriate. Though their stature varies, like that of all races exposed to different degrees of austerity in their local surroundings, they are all alike broad-built and thickset, with large wide hands and feet, thick wrists and ankles, short broad neck. The head is so broad that from above it seems nearly round; seen from the side, it rises in a high dome above the ears. The face is broad across the brows, cheek bones, and jaw; frequently therefore square in outline, and large in comparison with the whole head. The skin is pale and notably opaque, concealing the blood vessels, so that this kind of man blushes unseen, if at all; under sunlight it becomes sallow and sometimes yellowish, the sole point of resemblance, beyond its broad head, with the Mongoloid races of central Asia. In utter contrast, on the other hand, with the almost beardless Mongol, all Alpine breeds are excessively hairy; the head-hair often covers the shoulders of the men, and may descend to the women's waists or even to their knees. The beard and moustache are very long and dense; the hair often grows high over the cheek bones, and sometimes on the nose. Even the women often have hair on the face in middle life, and sometimes earlier. The hair is usually wavy, and raven black, and the eyes dark brown; but if the hair is neglected, it fades to a warm brown. Brown or chestnut hair is common in some districts, associated with coffee-colored or even honey-colored eyes: but as these varieties are commonest

in central Europe, where there has been most admixture with fair-haired elements from the north, they may be the result of cross-breeding, like the fairer varieties of the Mediterranean type.

Within this group of Alpine and Armenoid types there are well-marked varieties of head-form, best illustrated by comparison of profiles. Least specialized, most widely distributed, and also most characteristic of regions farthest east and west, such as the Auvergne, and the foothills of the Hindu Kush, or side-tracked, like the Caucasus, is a symmetrical almost globular brain case, of great capacity, rising steeply from the brow ridges, and above the ears, with fairly uniform curvature from the base of the nose to the nape of the neck. Here there has clearly been uniform accommodation of the brain case to its growing contents, unconstrained by that lateral pull of the jaw muscles, which has had so large a part in the shaping of the longer and narrower skulls among the long-jawed Negroes, and even among the longer-faced kinds of white men. Next in order of form are the square-sided varieties, in which the curvature of the vault begins higher, both in front and at the sides, as though the base of the skull had become so firm-set that accommodation had been mainly upward, beyond distinct brow ridges, and lateral walls which are vertical or slightly inclined outward as they rise. These varieties are common throughout central and southeastern Europe, in Caucasus, in western Asia Minor. Thirdly, the back of the head becomes flattened, both in profile, rising vertically from the neck, and also in top view. In extreme examples this flat back meets the curve of the vault abruptly, as if the head had been artificially deformed; and indeed there is reason to believe that such deformation is practiced deliberately on young children, by bandages and the use of a hard cradle-board, in Asia Minor, in Cyprus, in Crete, and probably elsewhere, until in some examples the breadth of the

head exceeds its length. This flat-backed type is common in Albania and among the southern Slavs, and also throughout Asia Minor, especially in and around Armenia. Lastly, in addition to the flat back, the forehead also becomes rigid and receding, so that the general appearance of the head is conical, rising to a high narrow dome, set far back in profile, and sometimes also perceptible from in front. In this extreme form, the face too looks as if it were flattened by pressure between the brows and the nape of the neck.

What the relations may be between these varieties, is not yet clear. The prevalence of the less specialized at the greatest distances and of the most differentiated only within the comparatively small region of Asia Minor and Armenia suggests that the whole group of types originated in the latter region and has been spreading eastward and westward for a long while. That it gradually fades out to the northeast along the great mountain belt of western Persia, and is eventually replaced by long-headed and dark-skinned types akin to the older inhabitants of India, shows that even in highland conditions its range is limited as temperature rises, and in particular as forest conditions disappear; and this inference is confirmed by its occurrence along the highland edge of the Arabian region, through Syria, and the Lebanon country, till it fades out similarly where the plateaus of south Palestine become too dry for woodland, even in ancient times. On the other hand, the earliest appearances of broad-headed men in central and western Europe, in late paleolithic times, seem to be connected with that general change of climate from dry to very moist, which spread over this continent the dense forests that covered most parts of it until historic times; and as the characteristic trees of these European forests form a consecutive series with those of Asia Minor and the Southeast, it seems probable that the spread of "Alpine" man into wide areas of lowland, for

example beyond the Carpathians, and down the Rhine into the Netherlands, has resulted from the former extension of the same conditions for forest life.[7]

"Northern" Types beyond the Mountain-zone

There is a special reason for insisting on this connection between forest habitat and "Alpine" population, which will be appreciated when we examine the distribution of racial types on the large lowland regions north of the Mountain-zone, and in the plains enclosed within its complex European section. In late paleolithic times, and also in the earliest neolithic period, the broad basin of the Upper Danube was occupied by a breed of very long-headed men, and only received broad-headed population, of Alpine type, comparatively late, and for the most part within the Bronze Age and in connection with advances in culture which do not concern us at present, except in so far as they contribute to the facilities through which this dry featureless region was made habitable by organized communities. For this Danubian lowland is covered with thick deposits of "loess," a fine porous dust too dry to maintain trees unless the rainfall is both copious and well distributed round the seasons. Without such moisture, it remains prairie at best, and easily fades into steppe and desert. Consequently it remained literally a "happy hunting ground" for the older inhabitants of peninsular Europe, long after the highlands, which enclose it, became afforested during the rainy period of transition from the older Stone Age to the new. These people are among the types which Sergi regarded as a northern extension of his long-headed "Mediterranean Race"; but the differences of physical structure are sufficient to separate this Danubian population from everything south of the Alps, except perhaps some leakage of it into Lombardy.[8]

Similar early long-headed people have been recognized, though less clearly, in the Hungarian basin of the Middle Danube and its tributaries, but though this basin is also

loess-covered, it has repeatedly been reduced to fenland in periods of abundant rainfall, by reason of the obstruction offered to its drainage at the "Iron Gates." Consequently its early population is little known, and may have been only marginal.

East of the Carpathians, the great flat-land which extends to the Urals and the Caspian, and beyond these to the foothills of the Central Asian plateaus consists of two main regions, over the northern of which, covered with drifted glacial deposits, the Alpine forest régime has spread northeastward till it has coalesced with the Siberian forest margin advancing westward as the climate allowed. The two sets of trees now interpenetrate each other in the neighborhood of Moscow. But none of them encroach on the southern region, because this is mainly loess-land, and consequently fit only for grass, unless the rainfall is much greater than it has been in historic or later prehistoric times. That there has however been a not very distant period, when the Carpathian forest margin lay far out toward the lower course of the Dnieper, is certain, from the quantity of vegetable matter and traces of tree roots which make the "black-earth" variety of loess so fertile as it has been since man began to cultivate it; and from the gradations of "brown earth" and "gray earth" which mark the early and the later stages of such an oscillation of climate and plant-distribution.[9] Similar restrictions of the great grass-land have probably occurred round its Siberian margin, though they have not been so closely studied as in Ukraine and Roumania; and also it is certain that the level and consequently the extent of the Caspian has varied greatly according as its supply of water compensated the loss by evaporation. At present for example the surface of the Caspian lies about eighty feet below ocean level, exposing a wide belt of steppe which would be covered if the levels were the same.[10] But the deficiency of "black earth" over

large areas makes it certain that this grassland has never been wholly overgrown with trees since the Carpathian and Siberian forests began to spread round its northern edge, and probably the broken margin of the woodland has not often been far in advance of the line where the loess ceases to cover the glacial drift. But while the difference between the cultural history of the regions east and west of a line running roughly north from the mouth of the Danube to the upper Dnieper only serves to confirm an early spread of the Carpathian forest over this end of the region, the wide distribution of the miniature flint flakes, characteristic of the latest paleolithic people, indicates that there were large areas of open hunting ground during the period of transition.

Here consequently there seems to have been since later paleolithic time a large continuous region where the conditions already noted on the Upper and Middle Danube were repeated on a far larger scale, and in view of the continuity of at least a nucleus of grassland during the transitional period it may be inferred that the earliest inhabitants of this region at the beginning of the New Stone Age were directly descended from paleolithic peoples. Here then we have an immemorial breeding ground for a definite and distinct type of man, in a region which has been the cradle of successive broods of emigrants in later times.

These earliest neolithic people buried their dead under earthen mounds, locally called "kurgans," which are very numerous and well preserved. From their practice, common also in the later paleolithic periods, of smearing the corpse with yellow or red ochre, these "kurgans" are commonly described as "ochre-graves." The "ochre-grave" people, or "kurgan" people, were tall, long-headed, with rather low forehead and prominent brow ridges, but the jaw was not prominent nor was the nose wide. They thus resemble in some respects the later and more modern-looking types of paleolithic man, in others the gigantic long-headed blond

type which is most familiar now in Scandinavia and round the Baltic coasts, but is also recognizable as an element of the mixed population of many parts of Russia. With the same northern blond type were connected also the long-headed neolithic occupants of the Upper Danube basin.[11]

West of the Dnieper the earlier stages of the "kurgan" culture are not found; on the other hand, as far east as this river are found settlements of a quite different culture characterized by the habit of decorating the common pottery with boldly painted patterns. The people of these settlements buried their dead not under mounds, but in mere surface graves, which have consequently been much more difficult to find. It is however at last certain that the "painted-ware" people were predominantly broad-headed, though they included long-headed wanderers, probably from the "kurgan" country, and also some cross-bred individuals.[12] Reserving for the present all discussion of the cultures associated with these distinct breeds of men, we have to note here that at later periods (which we shall have to define more precisely hereafter) the "painted-ware" culture disappeared from the whole region east of the Carpathians, and was replaced there by "kurgan" folk spreading across the Dnieper at least as far as the lower Danube, and also widely to the northwest toward the Baltic regions, where a blond gigantic breed has been dominant since the Later Stone Age. On their original grassland home, meanwhile, "kurgan" people continued to practice their inherited mode of burial until classical times, without serious change of physical type. There was some intermixture with Greek colonists along the Black Sea coast, but nothing at any period to justify Sergi's inclusion of them in his "Mediterranean Race."[13]

From the wide distribution, in modern Europe, of various types of people who are both more or less broad-headed and also more or less blond, it is evident that there has been much

intermixture of "Alpine" and "Northern" blood; and the very complicated distribution in graves of earlier periods, even of the more typical groups of both breeds, and still more of the numerous cross-bred peoples, makes it certain also that this interbreeding has been going on for a very long time; indeed, ever since the first westward and northward movements of the "kurgan" people from their cradleland east of the Dnieper. While therefore, whenever it is possible to prove that the people of a particular district, or migratory movement, was more or less blond, especially if it was also of more than average stature, it may reasonably be inferred that it was in part at least derived from some branch of the "northern" breed, this does not distinguish between descendants of direct emigrants out of that cradleland or even from east of the Carpathians, and descendants of the derivative stocks which made themselves a secondary home round the Baltic shores and elsewhere. Further, the fact that a people was blond, or gigantic, or both, does not prove it to have been long-headed; and conversely the fact that the skulls of an ancient people are broad-headed does not prove that they were not blond. Further still, though the fact that the skulls of an ancient people show the northern type of long-headedness is strong presumption that they were both tall and blond, the discovery of a batch of broad-headed skulls is no proof that the owners were not blond, even if they were also not tall. Finally some broad-headed people, who are also very tall, like the modern Albanians, are nevertheless very far from being blond.

Furthermore in the Ægean (as in any other region, such as northern Italy, or the British Isles, where men of "Northern" and of "Mediterranean" type may have met, beyond or across the highlands usually occupied by "Alpine" broad-headed folk) it is not possible to draw from the long-headedness of any series of skulls, without taking other characters into account, the conclusion either that their

owners were of dark complexion or that they were of fair. In modern Greece, for example, the nomad Vlachs are the longest-headed element in the population, but they have also the fairest complexion and hair, except that of those very broad-headed inhabitants of the village of Heraklio close to Athens, who are descendants of the Germans introduced by King Otho, mainly from Bavaria, in the middle of the nineteenth century.

How widespread had been the distribution of more or less blond breeds in peninsular Europe—and therewith of the sandy-haired, auburn, and red-headed varieties which seem to result from cross-breeding between dark-haired and fair-haired strains, and to be rather persistent, once established,—is clear from Greek and Roman descriptions of the Gauls and Teutons who broke through the Mountain-zone and invaded Mediterranean countries, and also from Greek descriptions of Thracians in settled occupation of the districts northeast of the Ægean. Of the complexion of the Scythians and other peoples of the great grassland north of the Black Sea in Greek times we are less fully informed; but Herodotus in the fifth century B.C. expressly describes the Budini, a people of the woodland north of it, between the Don and the Volga, as having red hair and blue eyes. We may infer that they were cross-bred from blond "kurgan" people intermixed with some forest folk of the darker complexion which is common among western tribes of the great Ugro-Altaic group in western Siberia and northern Russia. The latter however do not otherwise come within the scope of this survey. But as in medieval times an offshoot of them made their way from the upper Volga to the lands south of the lower Danube and became a principal element in the Bulgarian people, it is not safe to assume that such a movement had never happened before.

With these general notions of the relevant physical types and their regional distribution as our background, let us now sketch the outlines of an ethnography of the Ægean.

Early Human Types in Greek Lands

Human remains from the neolithic period are at present very rare; but a single skull from Limyra in Lycia, closely resembling the strongly Armenoid type of the modern Tachtaji foresters in that district, shows that this type is ancient there. It is also predominant all through Asia Minor at all subsequent periods: for example, the only skull from the "second city" at Hissarlik, the traditional site of Homeric Troy, registers a "cephalic index" of 82.5.[14]

A single neolithic skull, very thick walled and of otherwise massive build, from the island of Leucas close inshore on the west coast of the Greek peninsula, registers 81, and shows that the same broad-headed type had reached this distant seaboard early.[15] Here too the subsequent predominance of similar types, for example among the modern Greeks of the western districts, and the Albanian and Dalmatian regions to the northwest, supports the view that the "Alpine" type is at least as early as any other, and probably primary, on this side of the Ægean. Similarly in the mountainous interior of the Peloponnese, the predominant type is rather more broad-headed than in the rest of southern Greece.[16]

Among the central island group of the Cyclades, in the early Bronze Age, Paros, Oliaros (Antiparos), and Siphnos have a distinctly broad-headed population, though long-headed individuals occur. In Syros, on the other hand, in the same island group and at the same early period, the population is predominantly long-headed, but with some broad-headed individuals. It follows that the occupation of this central group of islands by two distinct types of people went on concurrently. That this process had been going on already for some while is shown by the contemporary population of Naxos, where the extreme varieties, both broad

and long, are absent, and the majority are of a fairly uniform mixed breed, registering between 75 and 80 and closely resembling the modern population of the whole of this island world. That the broad-headed element in these mixed populations came from the adjacent regions of the Mountain-zone may be inferred securely.[17]

But whence came the long-headed element? The answer comes from the comparatively abundant material—over one hundred individuals—from early Bronze-Age graves in Crete; supplemented, as on the mainland, by the modern distribution of the principal varieties between districts more secluded, or more accessible to immigrants from oversea.

For the Later Stone Age, as in Leucas, there is at present only a single specimen, from a rockshelter in the eastern peninsula, Sitia. It registers 80.3, but is as inconclusive by itself as the Naxian evidence would have been without the data from other islands.[18] Yet it shows at all events this, that the island was already accessible from one section or the other of the adjacent Mountain-zone; and imposes a certain degree of caution in dealing with the archaeological evidence, as we shall see later (p. 234). Hitherto the deeply stratified Stone-Age débris at Cnossus has not yielded any human remains, nor is there any well preserved material from the great charnel-houses of the Early Bronze Age. From other Early Minoan sites, the skulls show an average index registration of 73.4; and among them 55 per cent register 75 or less, and 10 per cent register 83 or more.

From Middle Minoan graves at Palaikastro in eastern Crete there is a series of eighty-seven individuals, and thirteen more come from graves of the same period in other parts of Crete.[19] The sixty-four males from Palaikastro average 73.4 and the twenty-three females 73.0, and this slight difference was the more significant because among the 70 per cent of individuals registering 75 or less are included 70.6 of the women, and only 65.3 of the men; while the

7 per cent, who register 83 or over, include 8.55 of the men, but only 5.87 of the women. The men, that is, were of a broader head-form than the women, and among them there is one skull registering no less than 87.6, and therefore of purely Armenoid type. Now such discrepancies between the sexes in a population which is in any case of mixed descent indicate the intrusion of a comparatively broad-headed people, represented by the sex most likely to have migrated without its normal complement of women, among a comparatively long-headed population of whom the women are more likely to have been spared by their conquerors than the men. Such discrepancies may last long; for example, the modern Bulgarian women are rather longer-headed than the men, though the intrusion of the Bulgars occurred about a thousand years ago.[20]

The thirteen other skulls of this period, which are mostly from sites farther west, have an average of 75.5, rather higher than the 73.4 at Palaikastro: and the ratio of the longer to the broader types is different. For the Middle Minoan period as a whole, the percentage of long-headed individuals (75 or less) has risen from 55 to 66.6, and that of broad-heads (83 or more) has fallen from 10 to 7.7. Either therefore the broad-headed element, which we have already reason to regard as intrusive, was dying out, or the long-headed element was being reinforced from somewhere. That some such reinforcement occurred is indicated by the presence of a new and fairly distinct variety registering 71.8, considerably longer-headed, therefore, even than the women of the already mixed population of Palaikastro.

In the Late Minoan period, however, though a fairly long-headed strain, with average 75.9, is well established, a series of skulls from graves at Gournia, on the neck of the Sitia peninsula, averages 76.5, and skulls of rather later date, collected from several localities, average as much as 79.1 and include four individuals over 83, but none below 75.[21] For

this period in general, the percentage registering 75 or less has dropped from 66.6 to 29.6; the percentage registering 83 or more has risen from 7.7 to 46.4, and there is a well-marked group of individuals averaging 80.5. Clearly between this series and those earlier ones, there has been a considerable influx of broad-headed folk represented by the new type last mentioned. As the material under review comes from the eastern half of the island, it has been assumed hitherto that the source of this broad-headed influx was the neighboring mainland of Asia Minor. This conclusion however is not necessary, unless it is proved either that the west of the island was less affected than the east, or else that there was no such movement outward from the Greek peninsula sufficiently general to affect the eastern districts from which alone there is evidence at present. That the people of Late Minoan culture who spread widely outside the Ægean between 1400 and 1200 were predominantly of the older Cretan type, is clear from a series of five skulls from Late Minoan tombs in Leucas, all between 74 and 76, and of uniformly slight-built type, in complete contrast with the massive neolithic broad-head from the cave in Leucas already noted.[22]

From the much larger mass of data for the modern population of Crete, representing moreover, as it does, all parts of the island, general conclusions result as follows: First, the general average of head-form has risen considerably, though it still stands lower than that of Asia Minor, and even than that of the Greek mainland: at Palaikastro, where the old skull average was 73.4, the modern skull average is 82. Secondly, comparison between individuals with Venetian surnames and the rest shows that the effect of Venetian immigration, whatever it may have been in the centuries from the thirteenth to the sixteenth, has been eliminated in the course of three hundred years; but this proves little as to the general rate at which Crete assimilates

alien types, because the physical characters of the elements most likely to have been introduced under Venetian rule do not differ much from those of the modern Cretan people. Thirdly, it is clear from the broader-headed average of the eastern and the western ends of the island, that Crete has been receiving alien and broader-headed elements from Greece as well as from Asia Minor. Fourthly, however, the most broad-headed, and also the tallest and (in general) most distinctive variety among the Cretans themselves is confined to the secluded and defensible highland of Sphakia near the west end; and the question must be raised whether this Sphakiote variety is mainly due to broad-head types intruded from the Greek mainland in later times, or to the survival and local inbreeding of a very early, if not altogether primitive element, as its geographical position suggests. We have already seen (p. 44) that the only Stone-Age skull from Crete registers 80.3.

Hitherto we have been dealing with the island world of Crete and the Ægean Archipelago, and with the large continental highlands on either hand; and we have detected here a comparatively long-headed element interrupting the continuity of continental broad-headedness. From the Greek mainland, on the side where it faces the Ægean, we have two short lists, from Argolis and from Attica, which on the whole bear out the same conclusion.

From Argolis there is no evidence at present earlier than the end of the Middle Minoan period, when this district had begun to be profoundly influenced by the civilization of Crete, and had probably received some of its people as settlers. In the "shaft-graves" at Mycenae, which cover the period from about 1700 to 1500 B.C., or a little later, there is considerable variety among the skulls, with a predominant variety registering about 80, evidently the counterpart of the mixed breed in contemporary Crete. Closely related in culture, but of rather later date, are the chamber

tombs at Nauplia, on the coast near by, with variable types of skull, averaging rather over 79.[23] In view of this evidence, and of four other skulls from Argolis, all broad, in Klon Stephanos' collection, it cannot be assumed that all broad-headed immigrants into Late-Minoan Crete came from Asia Minor. They may equally well have come from Argolis, or other parts of the Greek mainland.

In Attica, which had received considerable elements of early Ægean culture from the Cyclades, and shared afterwards in the spread of Cretan civilization to the mainland, a skull from the Late Minoan "beehive" tomb at Menidi registers 73.2, which is unusually low, and a series of six from various sites consists of three long, two intermediate, and only one broad; but from a Late Minoan chamber tomb at Spata there is one registering 80.9. In the Early Iron Age, later than the tenth century but earlier than the seventh, the occupants of the Dipylon cemetery at Athens are predominantly long-headed, but include one intermediate at 78.2, and two broad-headed at 82.7 and 86.7. Later still, among seven skulls of uncertain but ancient date from the Museum Hill, one is short, two are intermediate, three of ordinary long type, and one of a quite unusual form and very long.[24] Among skulls of the fourth and third century, two distinct types are recognizable, one with low forehead and high vault, the other with high forehead and uniformly curved vault; both however are within the range of "Alpine" profiles already described.

Though there is a rather high proportion of long skulls among this ancient series from Attica, this is not in itself incongruous, in view of early communications between Attica and the Cyclades, and the later attractiveness of Attica to settlers from all parts, during the classical splendor of Athens.

But whereas adjacent districts have a very high head-breadth in modern times—Corinth, infested with Albanians,

averaging 84, Aetolia 83.6, Euboea, also with numerous Albanians, 82.5, and the Greek kingdom as a whole, 81 before the annexation of Macedonia—Argolis drops to 81, Attica, in spite of Albanian settlements at Eleusis and elsewhere, to 79.6, and Thessaly, farther north, to 77. Now the very low average in Thessaly is certainly due to the large influx of nomad Vlachs from the highlands to north and west. Most of them return every season to regular villages such as Samarina beyond the old Turkish frontier. Some however have stayed and settled down in the Thessalian lowlands. The same Vlach element also brings down the average head-length of the whole west coast of the Black Sea, from the Danube to the Sea of Marmara, to 79, and locally to 78, whereas the rest of Bulgaria, which has but few of these people, has an average of 81.6, and rises in some districts to 85. As an indication of origin, we should note that though the Roumanian population north of the Danube includes only 5 per cent of blond individuals, 40 per cent have blue or gray eyes; the eye color among a mixed people outlasting the blondness of hair and complexion. The former existence of a longer-headed type in Bulgaria too is suggested by the observation (already noted on p. 45 in another connection) that the Bulgar women are rather longer-headed than the men. As the Rouman-speaking Vlachs are in general much fairer than their neighbors, and are historically derived from the Roumanian region north of the Danube, it is evident that the low head-widths for northeastern Greece, including Attica, in modern times result from Vlach infiltration, not from any persistence of old Mediterranean blood of the kind we have been identifying in Crete and elsewhere farther south. Moreover, among 1767 Greek recruits, 25 per cent had blue or gray eyes, though less than 10 per cent had light colored hair;[25] and light eyes are fairly common in Albania.

How ancient is this intermixture of northern blood? North of the Danube, the answer is given, first by the occurrence of the long-headed "kurgan" type of individual among the people of the "painted-ware" culture; next by the complete replacement of that people and culture by the westward spread of the "kurgan" folk, whose conspicuous tumuli were distributed widely over Galicia and Roumania before the end of the Stone Age in those regions. A more precise date can only be inferred indirectly from evidence which must be considered next.

Tumuli of the same type as the Russian and Roumanian "kurgans" are widely distributed in Thrace and Macedonia. Not all are of early date, but the contents of some of them in the northeast of the region are of a mixed culture including elements derived both from the "kurgan" folk and from the "painted-ware" people. Very few skulls from these burials have been examined; but among those from Rustchuk on the Bulgarian bank of the Danube there is a majority of long-headed individuals, mixed with broad-heads of Alpine types.[26]

There are mounds of similar appearance on both sides of the Dardanelles, and in northwest Asia Minor, but most of them have not been examined, and those which have been opened have either been of late date or have yielded no human remains. A very late set of skulls at Hanai Tepe in the Troad, probably buried centuries afterwards in a mound already ancient, registered from 70.2 to 78.0, with an average between 74 and 75.[27] There is clearly considerable mixture here; but as extreme types are absent, this mixture is the result of long fusion. It has produced a moderately long-headed stock quite different from the Armenoid types which are usually dominant in Asia Minor.

From the only excavated settlement in this region, however, there is ample evidence that this long-headed element is ancient here. In the deeply stratified ruins at Hissarlik, on

the traditional site of Troy, the "first city," represented by the lowest layer of all, has not yet yielded any human remains. From the "second city," which was destroyed by fire about 2000 B.C. (to judge from its remains; see ch. v), there is a single skull, of broad type (82.5), female, and therefore probably one of the actual inhabitants. In the "third city" which was built among the ruins of the second, three skulls have been found, registering 73.8 (male), 71.3 (female), and 68.6 (male). All are of different types and the last of them differs in its general form from normal "Mediterranean" and resembles closely the skulls from the early "kurgans." Clearly we have here representatives of a fresh mixed population, who brought their own women with them, and may therefore be regarded not merely as raiders who destroyed the "second city," but as immigrants who had come to stay.[28]

Anticipating provisionally the conclusions to which the distribution of early types of culture lead us (p. 256) it is certain, from the similarity of the culture in the "second" and the "third" city, that these newcomers did not bring with them any elements of the contemporary civilization of Crete or the Cycladic islands, but either had, or forthwith adopted, the habits, arts, and crafts of the people whom they had attacked. They came therefore either from some other district within the same cultural region or else had moved so far and so fast that they had lost any sedentary crafts which they formerly had. As there is no reason to suppose that Asia Minor has ever contained any long-headed people of its own, the only alternative is that the newcomers came from across the strait. Here a similar culture is represented by the stratified mound believed by the ancient Greeks to be the "tomb of Protesilaus," and also by other sites farther inland. But if the destruction of the "second city" was merely the work of local rivals, it is difficult to explain the failure of such people to exploit the great natural advantages

of the site; and the long misery of the "third" and "fourth" settlements points rather to profound disorganization of the whole district. And as it was about this time that the practice of mound burial seems to have spread widely into the northwest of Asia Minor, and far into its interior, the alternative explanation seems preferable, provisionally, that the destruction of the "second city" was an incident in a tumultuary movement of the mound-burying people who certainly destroyed and superseded the "painted-ware" culture between the Dnieper and the lower Danube, and have been traced through the spread of their burial mounds very widely into central Europe.

For the moment, however, we are only concerned directly with the human remains; and what is certain is that a fresh and apparently "northern" type is represented in the "third city"; that one of the skulls is that of a woman, and therefore that we are not concerned merely with a raid, but with a migration; and that if the suggestion that such a movement originated beyond the Danube is regarded as over-bold, the sole alternative is to admit that a long-headed and apparently "northern" people was already established in Thrace, and made its attack on Hissarlik from near by. We have therefore here direct evidence of an expansion of the long-headed people of the "kurgan" culture, south of the Danube, and eventually south of the Dardanelles, at a fairly early phase of the Bronze Age, and long before the first traces of the spread even of the culture—not to speak of the people—of the South Ægean: for that culture only appears at Hissarlik in the "sixth" city, the foundation of which is shown by the character of these Ægean elements to be not earlier than about 1400 B.C. and its greatest prosperity about 1250 B.C., whereas the catastrophe which replaced the "second" city by the "third" cannot be much later than 2000 B.C. and may be earlier.

Comparison with Other Regions of Contact and Migration

Before coming to general conclusions from this admittedly scanty material, it is instructive to compare the more cogent evidence from neighboring regions of inter-racial contact, all in some respects similar, but each presenting a special aspect of the matter in detail. We should also distinguish, in advance, two main types of migration which have not hitherto been clearly separated.[29]

I have spoken of the control which is exercised over the movements of man by the forms of the land masses, and by the sea basins which separate and dissect them. I return to this aspect of the Mediterranean now, to deal with its special relation to that inward thrust of non-Mediterranean men, which we have just seen to be so marked a characteristic of the human history of the region.

A distinguished historian has taken as the keynote of his work the notion of "Italy and its Invaders." The same notion is a clue to the history of the Spanish peninsula, of the region between the Rhine and the Atlantic, of the British Islands, and (in a quite different direction) of Palestine and its "Chosen People." In each case, the frontier obstacles, avenues of entry, and reservoirs of immigrants endure; they make history, as well as ethnography, because it is the human element that is different on each occasion.

For these great avenues of intrusion are not the scene of single, isolated movements. They are, as we well know, habitual means of access, immemorially old, as we read the tale of their archaeology; and no less today the despair of statesmen and strategists. It is a suggestive thought, too, that the discovery of a new route of this kind, by modern human artifice or ingenuity, is one of the rarest of occurrences. The great railways, for example, which penetrate the Alps at their wildest, depend so completely upon daily

repair and maintenance, that, in any real breakdown of the cosmopolitan mode of life they subserve, they would probably be the first routes to disappear, driving men back on those old natural passes which are traversable on foot or with pack-horses.

That kind of avenue naturally attracts the most attention from historians, which operates, so to speak, as a sluice, admitting newcomers more or less freely and copiously, if at all, through one or more well-defined passes or causeways. These can, however, be closed by superior force or skill; and they may remain long unused, merely for lack of desire to go that way. They are gates or breaches in strong natural partitions, not necessarily very thick, between large regions each more or less homogeneous within itself, but contrasted usually in their natural situation or resources, especially in altitude, climate, vegetation. Attack on such a barrier and its avenues is frontal; successful passage may be described as "transverse" migration. The great political frontiers between nation-states are usually of this kind, and avenues through them are the world's "cockpits." The Alpine, Carpathian, Balkan, and Himalayan barriers are examples of this; the Jordan valley is another.

In contrast with them stands another type of avenue and of migration which I would compare with a process of infiltration, or propagation, gradual, continuous, and for that very reason almost imperceptible as a process, and all the more surprising in its results. The mountainous region between eastern Tibet and the Malay Peninsula is the best example of this; the Equatorial Highland of East Africa is another; the Mountain-zone of North America, and its prolongation into Central America and the Andes is of more complex structure, but has had an essentially similar function. Here movement is longitudinal, not transverse; persistent usually, not spasmodic; an affair not of organized campaigning hordes, but of separate wandering tribes, clans,

or even families, shifting almost imperceptibly in one direction, like the spread of a new weed or animal pest; soaking rather than flooding the foothills and the lowlands around or beyond; for these regions of "longitudinal propagation" are usually, if not always, highlands. At all events there seems to be no instance of such infiltration apart from the rigid control exercised by complicated physical relief, nor in a direction unconformable to that of the principal structure lines. The distribution of the broad-headed types of man in western Asia and central Europe seems to result from movement of this kind along and mainly within the Mountain-zone, though the spread of the "terramara" settlements on the Italian side of the Alps, and of similar "lake-dwellers" down the Rhine valley into the Low Countries illustrates lateral spread from among its foothills. Within the near neighborhood of the Ægean, the southward infiltration of Albanian and Slav into districts formerly Romanized, and even Greek, has been of this "longitudinal" kind; within classical times, Illyrian aggression was similar; and we shall have occasion to ask, later, whether even this movement was the first in those parts.

Obviously, if the geographical circumstances are complex, migration may begin in one of these classes and end in the other. For example, pastoral nomads, or people formerly sedentary but disturbed from their abodes, may move forward on a broad front against a great natural barrier, and force their way "transversely" through its passes; but if the country behind that barrier be rugged highland, their further progress must conform to its structure and become more or less "longitudinal." It is precisely this that makes all intrusions through the Balkan passes so difficult to follow southward coherently; for indeed they were not long coherent. Conversely, gradual movement from the middle Danube, like that of the Gauls, up the Drave, Save, and Inn, or of the Slavs up the Morava, begins by

"longitudinal" infiltration, and only becomes torrential when something relatively accidental opens summit passes and discharges an accumulated "head" of humanity into lowland Venetia or Macedon, like the bursting of a dam. The Mongoloid occupation of eastern Bengal was probably an overflow of this kind.

Another non-Mediterranean example is the southern half of the Rocky Mountains, in relation to the plateaus of Mexico and Central America. Here again, with man, as with the animals and plants of this region, we have gradual and persistent infiltration of northern stocks and families into southern regions, rendered possible mainly by the longitudinal structure of the region, and a similar gradation of climatic control from metropolitan to colonial extremity. This American example is the more instructive because in it, as in the Balkan instance, the movement is not wholly of the "filtering" type: from time to time the floodgates were thrown open here too, and massed raiders, of lower culture like the southern Athabascan peoples, but of greater initiative like the Toltec and Aztec conquerors, broke loose over the more civilized plateaus of the south; with consequences political and economic which, so far as we can trace them, recall many features of the "Dorian Invasion" in Greek legends.

It would be instructive to work out these parallel instances in greater detail than is attempted here: and to lay alongside them the southward dissemination of the Bantu peoples of Africa, which is peculiarly suggestive through this point of contrast with the last, namely, that the highland avenue is at the same time of wide extent and restricted on either hand by lowlands of tropical jungle, while the area of colonization, south of the Equatorial rains, lies not in an isthmus region, like Central America, nor in a Malay archipelago, but in ever-widening "veldt."

Looking back, however, now, into our Mediterranean region, we are in a position to throw some little light (particularly if we keep in mind our African instance) on some difficult questions in the ethnology of western Asia as well as on our Balkan problem.

In the Italian peninsula, there are copious data as to the modern population, and ample early examples from which to reconstruct its history. Here the conditions were far more favorable than in the Ægean for the establishment of "Mediterranean" man on the north side of the lake region, and remains of long-headed individuals are found in graves of the Early Bronze Age, at Remedello for example, close to the foothills of the Alps.[30] The Alpine valleys on the other hand were occupied far back in the Stone Age by a broad-headed population with a peculiar culture—that of the compact defensible "lake dwellings"—which greatly facilitated expansion beyond the Alpine foothills as far as those of the Apennines, where the water supply necessary for lake dwellings failed, and further propagation was prevented. Only with the introduction, long afterwards, of a fresh social organization, at the close of the Bronze Age, and the adaptation of this to local conditions, was the Apennine frontier forced, and a broad-headed element thrust forward into the valleys of Arno and Tiber, and into the central highlands of the peninsula. Subsequently the Gaulish invasion in the fourth century B.C., the great facilities for peaceful intercourse under Roman rule, and then, after the collapse of Roman frontier defense, repeated invasions from central Europe, gradually modified the composition of the peoples of Italy from north to south. The result (fig. 2, *a*) is a complicated curve of frequency for the principal physical characters for Italy as a whole, which finds however its explanation in the varying make-up of the people, from province to province. For instance, the head-form for all Italy shows a summit of frequency at 79, which corre-

sponds with the type predominant in Sicily and therefore most purely Mediterranean; and other minor frequencies at 82, 84, 86, and 89, which are recognizable as major culminations in Lombardy, where the northern invasions have been

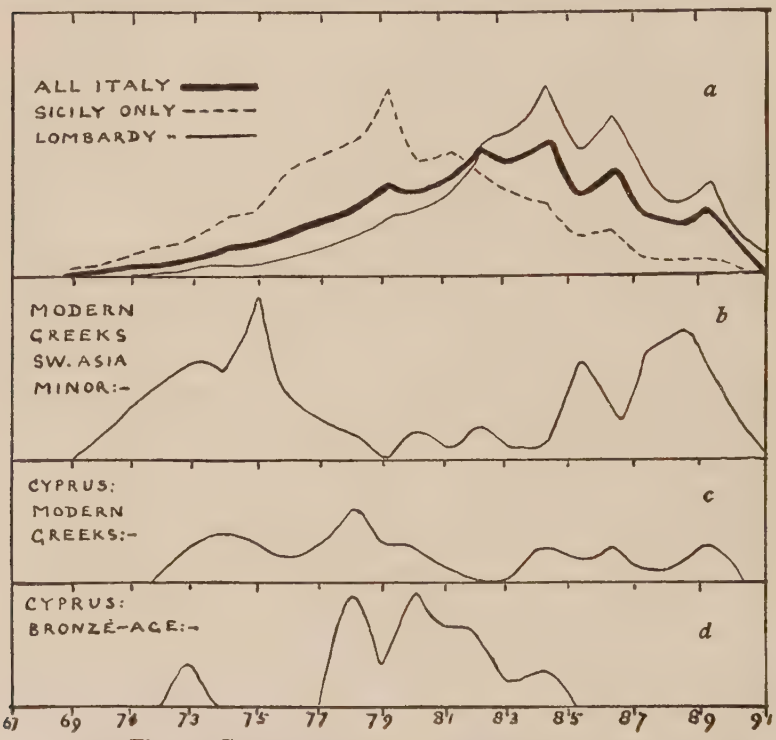


Fig. 2.—Comparative Table of Cephalic Indices

(*a*) Italians, after Livi; (*b*) Modern Greeks of Southwestern Asia Minor, after von Luschan; (*c*) Modern Greeks of Cyprus, and (*d*) Bronze-Age skulls from Cyprus, after Buxton.

The cephalic index (ratio of breadth to length) increases from 61 on the left to 91 on the right. Frequency of each head-form is shown by the height of the graph.

most extensive. It is a further conclusion from these culminations, that the broad-headed intruders have been themselves composite; not however that they were multiple, or that these culminations of type record distinct invasions; for it will be seen that they correspond closely with the

quite independent series of peaks 84, 86, 89 among the head-forms of modern Cyprus, and significantly, though not so closely, with those at 85 and 88 in the series of modern Greeks from southwest Asia Minor (fig. 1, *b*, *c*).

This series of Lycian Greeks is the only one from the immediate neighborhood of the Greek cradle-land of which a detailed study is available: the voluminous measurements made more than twenty years ago by Hawes in Crete being still unpublished. Among 179 persons, 49 registered between 69 and 79, with a conspicuous peak at 75, not far removed from the long-headed average of 73 representing the 70 per cent of Early Bronze-Age Cretans (p. 44) who registered 75 or less. Then comes a large group of 79 persons registering between 79 and 83, and representing the 23 per cent cross-bred Cretans. Finally there are 41 broad-headed persons, registering 83 or more, up to an extreme of 91, with peaks at 85 and 88, as already noted in comparing this series with the Italian evidence. As all these individuals were Greek-speaking Christians from a single compact community, unusually secluded from casual admixture, but situated on the coast between the main Greek-speaking area oversea and a no less secluded highland of Asia Minor, still retaining much forest, with a pure-bred Armenoid forest folk, Moslem and Turkish-speaking, the Lycian evidence is of the first importance as record of one of nature's experiments, and as a clue to much that is obscure in the processes which the fragmentary evidence from other districts imperfectly reveals.

In Cyprus, far removed from the Ægean, equally remote from the African coast, but within sight both of the south coast of Asia Minor and of the Lebanon range (which is also occupied by Armenoids) eastward, tombs early in the Middle Bronze Age, not yet fully published, contain a distinct group averaging 73, and a larger group between 77 and 85, with culminations at 78 and 80. The longer-headed

group is not of normal Mediterranean appearance, but has a very low forehead and prominent brow ridges which mark it as a primitive type, perhaps related to the peculiar variety of paleolithic man recently discovered in one of the Tabgah caves in Galilee.[31] Now an offshore island like Cyprus, heavily forested as it was until far on into classical times, offered the most favorable conditions for the preservation of such a primitive breed, provided it had the means to arrive there at all. The broader-headed types, which closely resemble common modern types on the adjacent mainland, are themselves a mixture resulting from long-continued cross-breeding between normal "Mediterranean" folk and normal "Armenoids"; and this mixture had already resulted in the emergence of two principal varieties, averaging 78 and 80, before the middle of the Bronze Age, which may be dated archaeologically by the furniture of the graves, between 2000 and 1500 B.C. These early local varieties are moreover recognizable still in the modern population of Cyprus, which consists of a majority of individuals registering between 72 and 82, with "peaks" at 74 (close to the 73 of the primitive Bronze-Age type) and 78 (one of the cross-bred Bronze-Age varieties), while the more broad-headed element in the Bronze-Age series has disappeared into a new element still more broad-headed (from 82 to 90) which is clearly due to fresh immigrants of more emphatically Armenoid type. Precise occasions of such immigration cannot be specified at present, but much allowance must clearly be made for habitual intercourse with the neighboring mainlands, as well as for the Turkish conquest in the seventeenth century, in view of well-marked mainland types among Turkish-speaking villagers in Cyprus today.

On the Mesopotamian borderland between Arabia and the Persian hills, the occupants of very early graves near the Sumerian city of Kish similarly form two distinct groups.[32] One is very long-headed, registering from 66.84

to 69.43 with well-marked brow ridges, though not such a primitive aspect as the long-headed Bronze-Age Cypriotes. The other ranges from 73.37 to 82.08; that is to say, it is a well-marked Armenoid type with the same cross-bred satellites as in Cyprus. The long-headed type is clearly akin to the fully developed "Mediterranean" or "brown" race, but resembles also the "Combe-Capelle" breed from late paleolithic sites in western Europe, an early precursor of it. It is notable that even among these very early people (about 3000–2800 B.C.) there was already some artificial deformation of the head; that is to say, distinctions of physical type were appreciated, and imitated deliberately. This Mesopotamian evidence is of the greater significance, as it offers no support either to the belief that there existed here a primitive broad-headed people overlaid by a "northern" aristocracy which faded out later, (whereas the long-headed type at Kish is not of "northern" aspect, and did not fade out)[33]; nor to the view that it was the Semitic conquerors of Babylonia who introduced the Armenoid type among a Sumerian population essentially of the "brown" race;[34] for at Kish the Armenoid element is already present, long before the Semitic invasion, and it is the long-headed element which, whether Semitic-speaking at this early stage or not, is geographically continuous with the "brown" types which are aboriginal in Arabia, where all Semites originated.

The case I have just sketched is, of course, a very complicated one, and it is not easy to state it without appearing to argue in a circle; our knowledge of the actual distributions, too, is as yet very imperfect. Rather clearer perhaps, because more continuous through a long period than either Cyprus or Lycia and historically more suggestive even than that of Italy, is another Mediterranean instance, in which both types of migration operate side by side. The east end of the Mediterranean, as a glance at the map will show, is cut off very abruptly by a long and lofty but very narrow

plateau, with marked longitudinal structure running from south to north, prolonging the rift-valley structure of eastern Africa from the Gulf of Akabah, along the valleys of the Jordan and the Orontes, and extending the same type of dislocation of the crust far away into the Armenian knot, on the upper reaches of the Euphrates. It is certainly a notable coincidence, and after what we have seen we may fairly regard it as something more, that the physique of the peasant population in the hill-country of Syria and Palestine from end to end of this region presents today well-marked Armenoid types, and the evidence of neolithic burials shows that this is no modern phase, nor attributable to invasions of Hittites or Armenians from the north within historic times.[35]

Yet all the while, pure-bred Arabs are imminent up to the very rim of their plateau reservoir "beyond Jordan"; and not only are they imminent now, but they have been there insistently for at least four thousand years, within the confines of a physical régime which is their own. And this is not all. These pastoral nomads have ever been prompt to seize opportunity of immigration and settlement. Sometimes it has been a cataclysm of armed pastorals, like the "Shepherd Kings" of Egyptian history, or the traditional ancestors of the "Chosen People." Sometimes, when the desert was no longer "in eruption," its human lava-flow was stayed, and all that entered the "Good Land" was a family of Bedawin here, and two families there—"Abraham and Lot," so to speak—forced, even so, to scatter and subdivide "for their substance was great, so that they could not dwell together."[36] Yet here is a strip of country, not fifty miles deep, from Jordan to the Midland Sea, continuously drenched with men of desert blood for thousands of years, but still retaining in its peasantry a markedly non-Arabian, and specifically Armenoid type, which connects

the region anthropologically in the closest fashion with the highland nucleus to which it is physically so close, and geographically so distant an outpost.

I have placed this instance last, because it clearly leads us to another question altogether. In Syria and Palestine, it is not merely the Armenoid type that persists; it is no less clear that the Arab type vanishes away, however assiduously it may be reinforced by immigration. Such colonization from "beyond Jordan" has been continuous, and at intervals intense, as we have seen; yet the desert blood fails and fades when it enters the "Promised Land"; it is the Gibeonite, the hewer of wood and drawer of water, the conquered Armenoid of the rift-valley and its maritime plateau hills, who survives the invader, and replaces him. Here, in an extreme instance, is the ruthless selective control of a geographical régime, in a region sharply delimited, and confronted with a contrasted type, both of region, and of man. And the ruthlessness of this control is all the more startling and notable, when the régime itself is one which to northern peoples seems almost a paradise. For us, "to be sent to the Mediterranean" means life renewed, and amplified; but for the Bedawin apparently it is death. The fact itself is but recently observed, and the reason is not yet clear; but the case will serve to show how intimate is the connection, even in so mild an environment as the Mediterranean world, between geographic factors and the limits of human distribution.

The Palestinian instance is not the only one in which Mediterranean conditions appear to exercise a strong selective control over immigrant man. Readers of Kingsley's *Hypatia* will remember the keen and humorous observation with which the intrusive Goths are sketched, intolerant of southern warmth and sunlight, and early exhausted by them; and anyone who has watched the health of a regiment

of mixed British in Malta or in Egypt knows how acute an anthropologist that warm sunlight can be. The complexions of the native-born among the British residents in a place like Smyrna tell the same tale; the children live, but climatic selection is clearly at work; and I have known Anglo-Greek families within which complexion was closely linked with susceptibility to regional diseases.

This selective control of climate on human physique clearly has an important bearing on the question, how race is correlated in the Mediterranean with language and culture. In our Palestinian example, the Armenoid peasantry speak Arabic, and nothing else; and their forefathers likewise spoke Aramaic, or Hebrew, or Canaanite, or whatever variety of Semitic speech the last desert-bred conqueror had inflicted. They are also good Mohammedans, to all outward show; perhaps a little inclined to overvalue "standing stones" other than the Kaaba, and to make oblation on the sly to rocks and growing trees: a strictly religious Pasha, in the nineteenth century, might have found cause to "break the pillars and hew down the groves," like Josiah or Hezekiah before him; and at Gezer, as we now know, the "pillar cult" and all the "abomination" thereof, goes back to a "pre-Semitic" phase. But where religion shows but a cloven hoof, economy goes unashamed. These men are less than half pastoral: they plough and sow; above all, they are growers of trees; they sit each "under his vine and under his fig tree": it is a land of "corn, wine, and oil," where men may sow their field "with mingled seed" as the heathen do.[37] Yet it was the heathen who flourished like their own bay trees; and it was the "sheep of his pasture" whom their own God could not save when they "mingled among the heathen and learned their works."

Language alone, that is, in this instance, survives from intrusive man; religion can survive, if it be tolerant enough of what it finds already: culture may bring and consecrate

new arts of life, or contribute its own experience to the improvement of existing arts; but it is the geographic control which determines first and foremost what man shall have to eat, and what are the trees, whereof, if he eat, he shall surely die; what, secondly, he shall wear, or desist from wearing; and then, in general, how he shall order his life, in respect of times and seasons of work and leisure, and in respect of his neighbors' convenience; what he shall be permitted to do by himself, and what he may only do if he and his neighbor can agree to do it, and how to do it, and for whose profit: how, in fact, he shall live in society, and to what special, regional end.[38]

It is here that our simpler Palestinian example—so fully capable of illustration from its ancient literature—must give place to the more tangled and complicated problems presented by the Greek cradle-land. Aristotle, long ago, attempted, and partly carried through, a classification of men's livelihoods into types referred to their economic basis; and if we go back farther, among the historical writers of the fifth century of Greece, and particularly to Herodotus, we find traces of an attempt to plot this economic basis on a scheme of geographical distribution; or at all events to record and collect the data for such a plotting.[39]

The "Prospector" Type and its Significance

One other corollary is suggested by the ingredients in this mixed Ægean population, by the diverse modes of intermixture, and by the selective control of geographical circumstances on the result.

There is a rather widely spread variety of large-built and especially very large-headed man, of dark complexion, eyes, and hair, and exceptional "drive" and force of character, which does not at first sight fit into the current classification of the threefold "white races." It is approximately the "littoral" type in Deniker's analysis of the population of Europe.[40] By others, on account of its maritime distribution,

and also of the occurrence of rude stone monuments, of early date, in some of the same maritime districts, it has been regarded, not very logically, as the builder of them. Further, because these monuments belong to a stage of advancement at which copper and gold were beginning to be used, it has been argued rather inconsistently that these people built these monuments partly because they were bringing copper, partly because they were taking gold away. For these various reasons they are described as "prospectors" and it is argued that they do not belong where they are observed to occur; whereas at the east end of the Mediterranean, where they are supposed to have originated, they have left no traces. Some, however, would have them come from the shores of the Persian gulf where neither they, nor rude stone monuments, nor copper, nor gold occur now.[41]

In view, however, of the long stretch of contact-zone between "Alpine" and "Mediterranean" man, and of the great antiquity of these contacts, even over considerable expanses of sea, the question arises whether discontinuous and widely distributed groups of physically similar people, combining characteristics of these two primary types, have necessarily come to be, where they are found, by "diffusion" from any single center, and have not, rather, been "evolved" locally as cross-bred strains of similar ancestry, similar physique and temperament, similar coastal habitat along the Mediterranean shores, and consequently similar facilities for adventures oversea, such as brought a minority of "prospector" individuals among the "Mediterranean" inhabitants of early Sardinia, in the graves at Anjelu-Ruju.[42] And it should be noted that along the other zone of contact, between peoples of "Alpine" and of "Northern" breeds, there has come into existence a similar series of well-marked derivative types, combining for example blondness with round head and thickset build, and furnishing, like the

southern "prospectors," such sources of driving power as the "John Bull" type in England, and the heavy-built Dutchman and Prussian on the Continent.

This comparative survey of other regions and examples of race contact has illustrated some of the chief limiting conditions of such intercourse; the distinction between transverse immigration and longitudinal propagation or infiltration, the selective control of regional conditions over intrusive breeds, by whichever process they are introduced, and the establishment of new breeds of men along a zone of marginal intercourse between principal races.

Supplementary Evidence from Other Physical Characters

Hitherto we have confined attention to a single physical character, the form, and especially the relative length and breadth of the head. This has been done, not because this character is of any special significance in the determination of race, but to simplify argument, and also because it happens that the data for this character are more numerous. To what extent they are supported by other physical characters, it is easy even for the untrained traveler to verify for himself by habitually observing the headgear of the people whom he encounters. Round-headed people wear round hats, not for aesthetic reasons, nor (as a rule) as ethnological labels, but because round hats fit round heads, like those of Chinamen, Russians, Turks, and South Germans. Long-headed peoples similarly wear long hats, like the English "bowler" or hard "straw," or "deer stalker" with a fore-and-aft peak, or the Scotch "glengarry." Even if they prefer round hats or are compelled to wear them, like the subjects of the unregenerate Turk, or the British "Tommy" and "blue-jacket," they either shift them at the first permissible moment to the back of their heads, where they fit best, or they stretch them to fit, with the brim

projecting fore-and-aft, but curled up at the side. Compare the brims of the "stove-pipe" hat, as worn by the Londoner and by the Frenchman from the south.

There was this further encouragement to begin with the head-form, namely, that it is a character which, except among hat-wearing people, does not attract much attention, and certainly did not attract the attention of the ancient Greeks sufficiently to be mentioned in their literature, except in the pathetic instance of Thersites, a bad bold man, who was not only "agin the government," but had his head pointed at the top, which we have seen to be an extreme Armenoid feature.[43] This character, then, we may discuss without fear of being prejudiced by our opinions as to the credibility of Greek testimony.

It is at this point that we may best consider the rare examples of men with bald heads, in Greek works of art; the only occasions when it was necessary to draw carefully the whole curvature of the skull. Here the few remaining skulls of classical Athenians give us confidence in the artists' powers of observation.[44] Commonest are those with well-filled forehead and uniform curvature of outline: unfortunately the hair usually conceals the whole occipital region. For the flat-backed head, rising straight from the neck, we have to look to youths, whose hair is close-cropped. More pronouncedly Armenoid is the high dome of the infuriated schoolmaster,[45] whose prominent nose, more Minoan than Hellenic, as we shall see, is commoner in the sixth and seventh centuries than in the fifth, to which this drawing belongs. Different from both these types are the Greek representations of giants, centaurs, and satyrs, with strong brow ridges, low retreating forehead, vault rising toward the back, short weak nose, and very high growth of hair on the cheeks.[46] To these features of giants and other outlandish creatures, we shall have to return shortly. There is also among ordinary people a low-class type prognathous,

low-browed, with mean concave nose; it is used also commonly for comic actors, and for Charon the infernal ferryman.[47] Contrast now with those low-browed types, the high forehead, erect profile, short firm chin, but also the very short head and broad face of ideal types in the fifth century, and also the less idealized types, with more prominent nose, in scenes of daily life.[48] When portrait statuary begins, the material becomes almost bewildering, and has not yet been adequately studied from an anthropological standpoint. But the observation of Klon Stephanos, that Greek statuary in general is broad-headed, has not been disputed, though the rarity of very bald heads in sculpture makes accurate measurement impossible. Socrates, who was bald, is an exception; and we learn from Plato, who had known him intimately, that he looked like one of those wild-men-of-the-woods whom we have just been considering;[49] a type which is not extinct even now.

There are however other characters, less easily demonstrable from ancient skeletons, but illustrated by literary references, and, more undesignedly, by the representations of Greek men and women in ancient art.

Stature and Body Proportions

Stature is notoriously variable, and is so directly dependent on nutrition, especially during the years when growth is rapid, that it is no sure mark of breed. Nevertheless there are tall races and short races, sometimes in close neighborhood. The Greeks, for example, admitted the tall stature of the Persians.[50] The Gaulish invaders of Italy, and the Teutonic peoples beyond the Rhine, seemed gigantic to the ancient Romans, and since they were also fair-haired, the inference is sure, that they were of large-built, more or less "northern" types, even if we had not their bones for measurement. The modern Albanians similarly are considerably taller, as a people, than the modern Greeks, and the Sphakiote highlanders of western Crete than other

Greek-speaking people. Consequently, when the Homeric poems describe Achaean leaders as conspicuous by their stature among their followers, or Hebrew chroniclers speak of Goliath of Gath and other "lords of the Philistines" as giants, the question arises whether there was here some difference of breed.

More significant are the proportions and general build of a people. It has been already noted that the Alpine and Armenoid types are not only broader-headed, but broader-bodied and also more inclined to corpulence than the "Mediterranean" long-heads. The difference of the hand-shake of a South German and an Italian illustrates this contrast in respect of the hand; Heine, you will remember, proposed to add a chapter to his "Essay on Feet," on the substructure of the Göttingen ladies; and in these days of short skirts and "plus fours" the ethnologist has a fresh and agreeable field of study. Let each man form his own conclusions as to the racial origins of his compatriots. This, like most other distinctions of breed, has found expression in the ideals of poets and lovers, as well as in political caricature. The Turkish ideal of feminine beauty has its counterpart in the popular picture of the Turk himself, who has however only acquired this Armenoid physiognomy since he stocked his harems with the beauties of Asia Minor and the Caucasus. In earlier times it was the same. The lithe forms of the Minoan Bronze Age, and especially the wasp waists of both sexes, prove first that the popular ideal of that culture was rather Mediterranean than Alpine, and secondly that there was the fashion to conform to it so far as nature allowed. Ridgeway called attention, long ago, to the very short hilts of Minoan rapiers, which hardly admit more than three fingers of an "Alpine" or "Northern" hand;[51] and the very small diameter of many Minoan and Hellenic finger-rings is evidence to the same effect.

There were however shorter and more thickset individuals in the Minoan population, of a type which is common also among the athletes of early classical times: and the attempts of buxom Minoan ladies, broad-faced and broad-breasted by nature, to be in the fashion, were not always wholly successful.[52] Still more significant is the testimony of those early female figures (the meaning of which we shall have to discuss (p. 224) in connection with the distribution of certain religious beliefs), extraordinarily broad-bodied and corpulent, which are common in the earliest Bronze-Age graves of the Cyclades, and are found also in Crete both in the Early Minoan period, and even in the later neolithic deposits at Cnossus.[53] Occurring as they do among a people whom their actual remains show to have been mainly of Mediterranean breed, though not without Alpine elements, they force us to consider how it came about that the type which was in a minority among the living imposed its own physical ideal on popular imagination and belief; more especially as this corpulent type is not confined to the Ægean but recurs as far north as the Danube,[54] as far west as the neolithic sanctuaries of Malta,[55] and as far east as the conventional Ishtar-figures of Babylonia from the days of Hammurabi onward.[56]

Hair and Beard

Another conspicuous contrast is in the quality of the hair, and especially in the shape and size of the beard. Though the hair both of Alpine and of Mediterranean breeds is usually more or less wavy, it is more commonly curled in the Mediterranean breed, and straighter in the other, especially among Armenoids. On this point, Minoan representations show that wavy or curly hair was normal; and in this respect Hellenic art and Greek literary phrases give the same result for classical times.[57] This however does not carry us far: it is with the beards that a contrast is recognizable.[58] For the Mediterranean beard is sparse, and pointed, because it is dense only on the chin; "Alpine" and

"Armenoid" beards are wide and bushy, and the hair grows high on the cheeks, as well as low on the forehead. Unfortunately the habit of shaving, recorded by the artists of many generations, has destroyed much valuable evidence; but the custom of wearing the beard, prevalent among ancient philosophers, medieval saints, modern Greek priests, and old men of all periods, gives us a fairly continuous series of records. In Early and Middle Minoan times beards are not represented as a rule. The earliest representation of a Cretan, on a seal impression of Middle Minoan period, shows a short head, very large face, aquiline nose, and massive square jaw.[59] The same type reappears among the Spartan caricatures, in the Early Iron Age (p. 77), and among the portraits of the earlier Ptolemies and Seleucids, raising questions not easily answered at present.[60] That the absence of beard was due to art, not to nature, is certain from a few bearded elders[61] and from the frequent provision of a few keen flakes of obsidian, a natural glass, in the earliest graves of the Cyclades, and of bronze razors later; it was as necessary to be presentable in the next world as in this. The women, for the same reason, were provided with face paint, usually green, and there are occasionally tattooing needles to remedy mundane omissions.

No conclusion can be drawn from this habit of shaving, as to the natural beard. Fashion, like some greater matters, is a thing that "passeth understanding." But it has been noted already that fashion tends to enhance natural characteristics, and in a mixed people the characters of the dominant element. In Egypt, for instance, gods and kings are represented with the scantier hair shaved, and only a small beard on the point of the chin. Conversely the wearing of moustache without beard, which enhances the width of the face, seems to have originated among the broad-faced Gauls, and has had repeated vogue since among broad-faced peoples of Central Europe, and neighbors influenced by their fashions.

So, too, the earliest representations of Cretan men show the same narrow pointed beard as the predynastic Egyptian statuettes. Later, even after shaving had become habitual, a Minoan cup of inlaid silver work shows a row of heads with narrow pointed beards, but shaven cheeks and upper lips.[62] One of the gold masks from the "shaft-graves" at Mycenae, of the sixteenth or seventeenth century, shows a moustache only, another the natural thin beard and moustache unaltered, while two others are clean-shaved.[63] A carved head in Minoan style, of uncertain but not very early date, has a fuller beard, and long moustache.[64] This is in accord with the skull types, which show predominantly Mediterranean descent till the fall of Cnossus about 1400, and then a rapid influx of broad-headed types. When pictorial art declines into artless caricature during the interval between Minoan and Hellenic, the men have the same shaven lip and narrow pointed beard as they have on the Minoan silver cup. Examples are the "Warrior Vase" from Mycenae, at the beginning of the "Dark Age," the "Aristonophos vase," and the Melian amphorae at its close.[65] Later the moustache reappears, and every stage of the development of this typical "Mediterranean" growth is illustrated in vase paintings and in statuary, large and small. That this was a real type is clear from portraits of all periods after the fifth century. The hair is sometimes curly, sometimes only wavy, but never quite straight.

Evidence that the Greek vase painters were competent to represent racial types comes from their drawings of Negroes and Orientals, for example, in the fight between Heracles and Busiris;[66] and in a Homeric scene of rather later style, the Trojan Dolon wears side whiskers and a moustache but no beard, like a nineteenth-century colonel.[67] The latter, being a stage scene, leads to the consideration of the deliberate caricatures of tragic and comic characters; and here we have something unexpected. Both the mad

hero burning household and furniture,[68] and the buffoons parodying acts of adoration,[69] are not of the thin-bearded, slight-built breed at all, but are thickset, and hairy up to the eyes.

This alternative breed is always used to depict spirits of the woods, like Pan and the satyrs; giants, monsters such as the horse-bodied centaurs, and bad men of all sorts.[70] In a remarkable scene, showing a Persian standard bearer thrown down by a Greek warrior, the barbarian is of the same type.[71] It was by reason of this unpleasing physiognomy that the philosopher Socrates was compared to a satyr by contemporaries, as the portraits of him show.[72] The inclusion of Pan and the satyrs in this type, and the localization of Pan in inland and upland Arcadia, and of the centaurs in the park-land foothills of Pelion and Ossa, shows that what artists and other retailers of legends had in mind was a real backwood population surviving in outlying districts, and especially in highland and forest. This hairy, broad-faced, and frequently snub-nosed type is still common; it is probably only the accident that Greek priests do not cut their hair at all, that makes illustrations of it to be most easily found in the monasteries.[73]

The Classical Ideal of Beauty

There remains the question, how either of these distinctively-bearded extremes in real life is related to the classical ideal of "Greek beauty," with its broad oval face, high upright forehead, full jaw and chin, recurved and sometimes almost sensuous lip, and (above all) its narrow straight nose descending in the same line with the forehead. Was this remarkable type the creation of some master, or school of design, and if so when and where? Or was it rather the product of countless impressions, experiences, and observations, such as have given us the national types of modern times;—"John Bull," an undesigned composite portrait from

Lord Palmerston, Dean Gaisford, William Thackeray, Charles Darwin, Francis Galton, John Millais, and Winston Churchill; "Uncle Sam," reincarnated in Abraham Lincoln; and the three generations of gracious American women who have presided over the currency of the United States.

The so-called "Greek type" is an old one in the Ægean. The Minoan silver cup and the stag's-horn head, already mentioned, have something of it already; and in profile, at all events, the ladies in Cnossian frescoes[74] and on the glazed cups with female heads from Late Minoan tombs in Cyprus, probably about 1300 B.C.,[75] though these last are not more fully idealized than some of the sphinx heads which are their Attic successors. But side by side with them, there are other Minoan types, more purely Mediterranean, and recognizable among the modern population, especially in the islands:—the "Parisienne" from Cnossus,[76] and the worshipers on the Agia Triada sarcophagus; the long narrow face in stucco from Mycenae; the fresco lady from Tiryns, the more prominent nose and high forehead of the Cup-bearer, the maturer, more fleshy, small-nosed type, of the helmeted heads from Spata. There are also the broad-faced, round-eyed votaries from the "Temple Repository" too plump for their belts; above all, the Lady of Boston, who might pass for a Swede or for a daughter of the Middle West.[77] To her we shall have to return (p. 199) in another connection. To group these varieties under two successive types—one of them Middle Minoan in date, with prominent chin, aquiline nose, and hair cut short, the other Late Minoan, from about 1750 B.C., more angular, and with larger nose, wearing its hair long—is to simplify overmuch.[78] The reality is more complex, though one or other of the two main groups of factors, "Mediterranean" and "Alpine," is frequently recognizable, and sometimes dominant.

Thus though the "classical" type begins within the Minoan Age, it begins only as one of a group of varieties, among a people not only already composite, but interbred so long, and under sufficiently congenial conditions, that weaklings and dysharmonic misfits were disappearing, and fresh varieties were being established and in a fair way to become in due course thoroughbred, each in its own special way. Here we see the significance of that minute dissection of the Greek cradle-land into self-contained areas of occupation, which we noted at the outset. This is obvious when we consider each smaller island as a separate whole. But within Crete itself there are a dozen such districts, and in some of the larger islands two or three. Along the bewildering coast line of both mainlands it is the same; still more among the highlands of the interior. In our own days, Albania is the only quite unspoiled bit of such insulated tribal population, where types of beauty change with the cut of the costumes from tribe to tribe and sometimes from village to village. Yet in the modern Ægean, where things so different as styles of embroidery and varieties of dialect go closely together from island to island,[79] it does not need much practice to recognize local types—I will not say, always, of beauty—but of feature, build, and bearing.[80] When the seaways were cleared of piracy, you could have seen as many types of Ægean beauty at the "Palace of Minos" at Cnossus, as in that of King Constantine.

Some of these other Minoan types came through into classical Greece; the tip-tilted nose and pert chin of the "Parisienne," the more bulbous nose of the Lady of Tiryns, the fine-drawn jaw and arched eyebrows of the boxer from Kampos, the inquisitive beak, thin lips, and "archaic smile" of the "Cup-bearer" and the frescoed youths from Tiryns.[81] This last feature, the "archaic smile," is conspicuous in the early statuary of Cyprus,[82] and survives there today. Other types quite disappear, and meanwhile, fresh types have come in.

At this point mention must be made of the remarkable clay masks from Sparta, of the sixth or seventh century, which give us, if not "speaking likenesses," at all events cruelly realistic caricatures, of the one people in historic Greece who had remained inbred since their immigration, which tradition placed at the end of the twelfth century.[83] One very pronounced type, with aquiline nose and angular jaw comes close (as has been noted already) to portraits of the earlier Ptolemies; but another has the same prominent bulbous forehead and strong nose bridge as a skull of the Early Iron Age from a grave at Halos in Phthiotis.[84] In what sense these Spartans were themselves Greek, we must consider later, in view of their language and traditional history.

For the Athenians, if we have not this ruthless realism, we have at all events a very large series of portraits. Rare in the fifth century, they become common for celebrities in the fourth, and copious for ordinary officials and well-to-do citizens from the third to Roman times. Since they differ considerably in individual traits, they are the more valuable for the points that they have in common, and it would be a valuable addition to our knowledge, if they were studied anthropologically, with composite photographs, such as have been made for modern European peoples.

If there are two men of the "great age" of Greece, other than Socrates, whom we should recognize in a crowd, they are Demosthenes and Alexander. Of Demosthenes we have only elderly careworn versions, but the structure of head and face shows all the more clearly for this, and refers him to a frequent, indeed dominant type, among the later Athenian portraits.[85] Of Alexander's antecedents we know that his father, a Macedonian, had the low forehead, prominent brows, and high bushy beard, of the "backwoodsman," though the nose is firmer;[86] and that his mother was a beautiful temperamental highlander from Epirus, prob-

ably much like the tall handsome women of Albania and Montenegro. But Alexander himself came very near to the Greek "Apollo" type:[87] a little broader in forehead and face, heavier in the brow ridges, than the ideal, and a shade more florid than would reveal the set of the jaw; but in profile a cousin to the younger gods, and a cousin also to Macedonians in the next generation or two, who lived to maturity. That the portraits on their coins perpetuate profiles like that of Alexander, was less due to devotion or policy than to the racial homogeneity of the new lords of the world.

Not much is added to this analysis by the late wax-portraits on Greek mummies from Ptolemaic and Roman Egypt and Christian mosaics from the fifth century A.D. onward: except that the Hellenic ideal disappears; Alpine and Armenoid types, large-eyed, broad-faced, and fleshy, become common; also low-bred and cross-bred individuals with dysharmonic faces and weak jaws. Naturally, with the spread of Christianity, and the shift of the political center to Constantinople, and of "big business" to Antioch and Alexandria, low-class and Levantine-looking Armenoids prevail, with high domed heads when they lose their hair and become saints or bishops. Both types of beard remain common; but allowance must be made at this point for the Syrian and Palestinian types, mixed Armenoid and Arabian, that were traditional for Christ and his Apostles; Peter with his great stature, burly fisherman's frame, and massive symmetrical dome, Paul with the low forehead, bushy eyebrows, and high beard of Socrates and the backwoodsmen of old time. As Paul came from Cilicia, this is just what we should expect. The few portraits—Justinian, a sleepless competent man of business, Maximian, the hard fanatical churchman, Theodora the stage adventuress, slight and alert, with her ladies, whose pert chins and wide eyes under arched brows recall the palace-beauties of Cnossus—are graphic testimony to the mixture of high and low types

which infested the Byzantine court. So too occasionally now, among the cross-bred majority, one finds, especially in the island world, very passable models for an Apollo or a Hermes, especially at that age "when the time of youth is most gracious."[88]

Summary of Conclusions as to Physical Breed

(1) Summarily, then, the Greek cradle-land in the Ægean basin has been occupied, since the beginning of the Bronze Age at all events, by a population partly "Alpine" or "Armenoid," partly of "Mediterranean" descent. The proportion of each in the mixture has varied, and on the whole the "Alpine" and still more the "Armenoid" element has increased, both between Minoan and Hellenic times, and again between Hellenic and modern. But the "Mediterranean" element, though it has gained no ground since Minoan times, has shown remarkable endurance and vitality under conditions which suited it, and in a few sheltered and exceptionally favorable places has maintained itself almost pure.

(2) Before the beginning of the Bronze Age, evidence is scanty, and separate lines of inquiry lead to different though not necessarily contradictory results. While "Alpine" individuals, at all events, have been found in Stone-Age conditions on both sides of the Ægean and also in Crete, "Mediterranean" individuals have not been recorded before the beginning of the Bronze Age. But the Stone-Age culture of Crete, on its material side, belongs, as we shall see in Chapter V, to a wide Mediterranean province, and has only later and partial affinity with the cultures of Asia Minor or of southeastern Europe, so far as these are known at present. Even the symbolic female figures, which are common to Asia Minor, the Cyclades, and Crete, are common also to Thrace, Sicily, and Malta. It cannot therefore be argued that they prove Asiatic influence only, unless it is admitted that this influence reached these remoter regions too.

(3) But since the only "Alpine" individuals of neolithic age come from remote and sheltered districts, it is possible that the highland and forested areas were more attractive to such people, and the lowlands and coasts, then as usually later, to "Mediterranean" folk. If so, much interpenetration might occur without frequent collision; and it is certain from the patchwork population of the Cyclades early in the Bronze Age, that such interpenetration was occurring then, in the very heart of the region.

(4) Seeing that geographical conditions permitted easy access of northern folk to the northern districts of the Ægean basin, and that northern individuals have been recognized as far south as the Troad, and as far back as the Early Bronze Age, it may not be assumed that all long-headed people in that basin are of Mediterranean descent; they may owe their long-head form to northern ancestry. On the other hand, since some blond people are round-headed, it may not be assumed that all blond people are of purely "northern" breed, without the positive evidence of "northern" skulls.

(5) At this point, then, we have to look for some fresh source of evidence, as to early relations between the Ægean and the regions north and south of it, the Mediterranean shores and the home of "northern" man beyond the Danube. For the former we shall have to wait till we deal in Chapter V with archaeological proofs of material culture; with the latter, we are confronted at once by the fact that Greek is an Indo-European language; and with this we shall be concerned in Chapter III.

(6) The attempt to characterize more precisely the Hellenic ideal of beauty is postponed, till we have taken note of the evidence for complexion, and the color of hair and eyes. Here the evidence of monuments is more fragmentary, and that of literary allusions more explicit. More-

over the whole problem of the external appearance of the classical Greeks is complicated by the conception which they had inherited of the physical characters of their gods, and this in turn complicates the consideration of Greek religious beliefs which is attempted in Chapter IV.

CHAPTER III

Common Language: Evidence from Comparative Philology

From the study of the physical build of ancient Greek people, in comparison with other evidence for the distribution of human breeds, we have been brought to the conclusion, (1) that the Greeks of classical times were of mixed descent; (2) that two of the principal strains in that mixture, "Alpine" and "Mediterranean," had coexisted in the Greek cradle-land at least since the beginning of the Bronze Age and had interbred into a number of local strains before its close; (3) that quite early in the Bronze Age a third element appears, in the Marmara region, akin to the "Northern" type, whose source is on the steppe east of the Dnieper, and the westward spread of which began early enough to account for the appearance of similar people in the "third city" at Hissarlik. As the general proportions of the skull in the "Northern" and in the "Mediterranean" types are not very different, there is greater risk of confusion between these two elements than between either of them and the "Alpine-Armenoid" types, so long as we are restricted to this anatomical evidence. But the "Northern" type differs in two other respects from the "Mediterranean"; in its geographical distribution, for it comes into the Ægean world from the north and by land; and in the superficial appearance of its living representatives, for it is characteristically blond. To trace more precisely, therefore, the movements and effects of intruders from the north, we must turn to other kinds of evidence; and these we shall find, when we examine the second and the third of Herodotus' criteria of nationality, namely, language and religion.

The Greek Language

When we speak of the Greek language, we are using a general and abstract term to describe collectively several groups of closely related dialects, within each of which minor differences are recognizable between the speech of almost every community and its neighbors. In a country so minutely subdivided geographically, these local variations of speech are only what is to be expected. What is less easy to explain is the existence of larger groups clearly distinguished from one another, and each nearly homogeneous within itself. Not that these larger groups were by any means uniform in early times. Just as the common speech of literary and commercial use, in Hellenistic times, was an artificial idiom mainly derived from the common speech of educated Athenians, but modified by general use among Greeks from all parts, so the literary Ionic in which Herodotus and Hippocrates wrote was an artificial idiom current among learned and literary men in Ionia during the fifth century alongside the four colloquially spoken dialects of Ionic of which Herodotus has described the geographical distribution in his own time.[1] By comparison of examples of dialects as early in date as the sixth and even the seventh century, but for the most part of the fifth, fourth, and third, it is possible to trace back the more important variations to the eleventh or twelfth century or rather to the redistribution of dialects by movements traditionally ascribed to those centuries (fig. 3).[2]

The Greeks themselves recognized three main groups of these dialects, Æolic, Ionic, Doric, best represented by the dialects of the three main groups of comparatively late Greek settlements on the foreshore of Asia Minor, but all recognizable also in peninsular Greece; Æolic in Thessaly and Boeotia, Ionic in Euboea and (with certain modifica-

tions) in Attica, Doric mainly south of the Corinthian Isthmus. To these three, modern philology has added a fourth, represented by the dialects of Arcadia, Cyprus, and the Greek colonies in Pamphylia and other parts of the south coast of Asia Minor, and has considerably extended

Fig. 3.—Geographical Distribution of Greek Dialects in Early Classical Times

the group to which Doric belongs, by associating with it the dialects of northwestern Greece which, together with Arcadian, the ancients thought to be Æolic.[3]

The philological ground of distinction between these four groups is the kind and amount of modification of their principal vowel sounds, and also of certain consonants, from the corresponding sounds in the earliest phases of Greek speech recoverable by comparison with other Indo-European lan-

guages; supported by other changes in the terminations of verbs and substantives. In Ionic and Attic, for example, *a* became first *æ* and then (in Attic) *e*, and consonantal *v* disappeared: in Æolic, initial *th* and *t* became *ph* and *p;* in the Arcadian group *e* and *o* changed to *i* and *u*. Doric on the other hand retained a number of more primitive characters which most other dialects had outgrown. The whole question of the relationship between the main groups is complicated by a number of cross-resemblances, which are only noted here by way of caution against arbitrary use of any one set of likenesses or differences. The dialect groups are, in fact, groups of local idioms, not standard modes of speech mishandled in popular usage.[4]

From their distribution in classical times, it will be obvious that it is only on the west coast of Asia Minor that the three divisions recognized by the ancient Greeks were an adequate classification of coherent local groups; Æolic from the Hellespont to the gulf of Smyrna; Ionic south of this point to Miletus just south of the Maeander river; Doric from the gulf of Iasus to Rhodes.

Doric, it is true, was continuously spoken south of Rhodes, in Carpathos and Casos, in Crete, and also in Thera, Melos, and a few other islands in the southern Cyclades; thus linking Asiatic Doris geographically, as it was associated traditionally, with the Doric-speaking districts of the Greek peninsula, Messenia, Laconia, Argolis, with Megaris north of the Isthmus. Ionia similarly lay opposite to the Ionic-speaking Cyclades and Euboea, and also to Attica; but the Attic dialect differed appreciably from the insular and Asiatic dialects of Ionic, though traditionally the Ionians oversea were mainly emigrants from Attica. Æolis, too, lay opposite to two Æolic-speaking districts, Thessaly and Boeotia; but between these lay Phthiotis, Malis, Locris, and Phocis, where the dialects were of the West Greek group which is now recognized as closely

akin to Doric; and as these territories form a wedge between Thessaly and Boeotia, it seems clear that the West-Greek dialects have been intruded from farther west, in the same way as the Doric dialects of Peloponnese were believed in antiquity to have been recently intruded from northwestern Greece.

The traditional genealogy, then, of "Hellen and his sons," in its earlier form, not only is later than the "coming of the Dorians," but presupposes the establishment of the three groups of Asiatic colonies.[5] On the other hand, it came into existence before the establishment of the "Achaean" colonies in South Italy, or at all events before their ethnological significance was realized; for it is only in the redraft of the traditional pedigree by Hellanicus, in the fifth century,[6] that "Achaeus" is bracketed with "Ion" as grandson of Hellen, under a very suspect father whose name Xouthos simply means the "brown" man.[7] As the western "Achaeans" did not speak Ionic, but West-Greek dialects like their mother-tongue in north Peloponnese, the linguistic basis of classification has here been superseded by one based on tradition, and supplemented by a racial contrast between "brown" people and others who were not "brown." How diagrammatic the pedigree had become by this time is shown further by the addition of a daughter of Hellen, whose name Xenopatra, the "clan of strangers," suggests that provision was being made for receiving as "sons of Hellen" people who could claim to be so only on their mother's side, if at all. Who such people were (so to speak) on the father's side was a further question; for as we have seen already (p. xxi), Greek tradition was clear that the Greek people was of mixed origin, and that the "Hellenic" ingredient had spread recently and at first locally among the others.

In the fifth century the type specimen of a people which had been converted from Pelasgian to Hellenic was the population of Attica, which certainly had a dialect more

strongly characterized than any other at that time.[8] From the fourth century onward, however, it was the Arcadian who was presented as typical of "pre-Hellenic" man.[9] The reasons for this were in part at least political, but it can hardly have escaped the notice of contemporaries that Arcadian envoys and exiles spoke very queer Greek, and had notions and habits of their own. But the "Pelasgian theory" was sufficient explanation; at most it was observed that there were parallels to Arcadian customs in other backwaters of the Greek world, and also in some parts of Italy. There was at all events no further attempt to amend the Hellenic pedigree; even when the West-Greek dialects had come under review, in the days of the Ætolian and Achaean leagues, for the same kind of political reason as the Arcadian in the fourth century, they were set down as a kind of Æolic; and so matters rested till the scientific study of languages began again, early in the nineteenth century.

So recent was the expansion of the "sons of Hellen" believed in classical times to be, that an approximate date was assigned to it, at the beginning of the fifteenth century. All pedigrees of "sons of Æolus" ran up to the generation of 1360, and stopped there; Hellen therefore, the father of Æolus, was conceived to belong to the generation of 1400, and Deucalion's flood to that of 1430. The significance of such legends must be examined at a later stage in this argument (Chapter VI). For the moment, it needs only to be noted that one of the Æolid pedigrees is given fully in the *Odyssey*, and is therefore not a mere invention of classical scholarship, but a piece of folk-memory presuming an accepted perspective of a period before and beyond the establishment of the actual state of things, in which the Homeric poems came into being. There was, that is to say, a beginning, as well as an end, to the traditional "coming of Hellen and his sons," and this "coming" was conceived as a more or less historical period lasting about four hundred years,

beginning with some kind of dispersal from a source in or near the southern margin of Thessaly, about 1400 B.C., and ending with the establishment of Greek-speaking communities, Æolic, Ionic, and Doric, in the west coast of Asia Minor, in the latter part of the eleventh century B.C. It is important to realize how long this period was, and how much time it allowed for complicated sequences of events. It is as long, for example, as the interval between the coming of the Saxons into Britain, and the reign of King Alfred; or in European history, between Alaric and Charlemagne.

The Greek language then consists of a fourfold group of dialects which were believed by the Greeks themselves to have been distributed in Greek lands not many centuries before Greek history begins; and even some of the most characteristically Greek peoples of historical times, such as the Athenians, were believed to have learned to speak Greek after previously speaking some other language. But to trace "Hellen and his sons" back to a home in Phthiotis, in the days immediately following "Deucalion's flood," though it seems to have satisfied ancient Greek curiosity, does not explain the resemblances detected not much more than a century ago between the structure and vocabulary of all dialects of Greek, and those of other languages of the same "Indo-European" group, as far east as Sanskrit in northern India, and as far west as the Italic and Celtic languages of Europe.

For us, therefore, the linguistic problem is threefold. The first question is, what kind of language was spoken in Greek lands before the introduction of Greek? And the answer to this comes from a few local survivals, and from a comparison of local place names with the place names of adjacent regions where languages distinct from Greek were still in use in classical times, or have been preserved in some other script than the Greek alphabet.

Secondly, we have to ask, how an Indo-European language such as Greek came to be introduced into the lands about the Ægean, and especially why it obtained so firm and early a hold on the European side, and so late and precarious an occupation of the Asiatic coast, and even in European Thrace. The answer here comes from a comparison between the circumstances in which Indo-European languages first appear in regions east of the Ægean, where documentary evidence is available much earlier than in Greek lands, and in those of the Greek peninsula and adjacent regions landwards; and in particular we have to follow up the clues offered in Chapter II by the rare indications of intrusive kinds of men from north of the Mountain-zone, in the light of the geographical features of the whole region, illustrated in Chapter I, and of the collateral arguments from religious beliefs and material arts, in Chapters IV and V.

Thirdly, when we have formed some provisional idea of the mode, and date, of the arrival of Greek speech in Greek lands at all, we have to return to the relations between the principal dialects of Greek itself, and ask how far their actual distribution accords with ancient beliefs as to their origin, and in particular with the notion of a proximate dispersal from a focus so far south as Phthiotis, or even (as the legend of Deucalion's flood suggests) as the northern and eastern slopes of Parnassus.

Survivals of Pre-Hellenic Languages

Beyond and even within the "Period of Migrations," which (as we have seen) was closed, not initiated, by the colonization of the west coast of Asia Minor, there is no direct evidence as to the distribution of the Greek dialects; for there are no inscriptions in Greek characters so early as these events, and the numerous documents from Minoan palace archives in Crete, and similar writings from elsewhere,

have not yet been read, so that it is not certain whether the language of these is some kind of Greek or not.[10]

That the Minoan inscriptions are not in Greek is, however, the more likely alternative. Greek belongs to the Indo-European group of languages, and so far as its structure is concerned, its vowel system has remained very little changed from the earliest recoverable phase in any of them. Its verb is more completely preserved than in any other, except Sanskrit; its noun retains five of the original case-endings in regular use, and occasional examples of one or two more. With the structure of the language so well preserved, existing dialects, though themselves represented only in comparatively late texts, are good evidence for the general character of any earlier variety of Greek; and as the later Minoan script separated each word from the next by punctuation, and also represented each syllable by a separate sign, it should not be difficult to recognize Greek verb-inflections and case-endings, if they are present at all. Hitherto however this has not been found practicable.

On the other hand, the Greek vocabulary contains an unusually high ratio (estimated at about forty per cent) of words which are not recognized as belonging to any Indo-European root or stem. Probably the ratio is really even higher, because it has been easier, and also for some enquirers more attractive, to identify doubtful words as Indo-European, than as loans from some other kind of language.[11]

Greek has, therefore, after taking independent shape as a language or coherent group of dialects, been in contact with a civilization different from, and more elaborate than, that enjoyed by those who spoke any kind of Greek before such contact was established. Further, some of these "loan words" are of certain well-marked forms, or include distinctive suffixes or terminations, which are found also commonly in names of places, rivers, hills, and other physical features, not only in most parts of Greece and the Ægean,

but also in large districts of southwestern Asia Minor, where Greek was only spoken in very late times.[12] It is inferred from this that these local names, and the words of common use which resemble them, have been taken over from a language or languages habitual in this region before Greek was spoken there; and further, from the large percentage of borrowed words in Greek, that the people who first spoke Greek in these lands had to make acquaintance with a large number of things, in daily intercourse with those whom they found there, for which they had no words of their own. That is, they were strangers in a strange land and had come rather suddenly into contact with fresh surroundings and a culture and mode of life different from their own. If these strange words were found only in late Greek, they might be explained as loan words due to trade or travel in classical times, but a sufficient number of them are used in the Homeric poems to make it certain that this borrowing is in great measure ancient. That they have been borrowed from either Illyrian, the nearest neighboring language to the northwest of peninsular Greece, or from the Thracian and Phrygian group (best represented now by the earliest mediaeval stages of Armenian) to the northeast of the Ægean and in northwestern Asia Minor, is also unlikely, because the place names already mentioned are far more frequent in the parts of Greek lands and Asia Minor where there is least reason to believe that these other languages were spoken at any time. Also, some of the same words appear also as loan words in Armenian, and consequently cannot have come into Greek from the group to which Armenian itself belongs.

A few scraps of evidence help rather to illustrate, than to remedy, our ignorance of the older languages of the Ægean. The islands of Lemnos and Imbros in the North Ægean were still inhabited as late as the end of the sixth century by a people whom Herodotus writing in the fifth

century describes as "Pelasgian." To the same people he ascribes settlements in the Hellespont region, and also on the eastern border of Macedon, a little inland behind the Chalcidic promontory, and says that these two groups of communities could understand each other's language; that there were other survivals of "Pelasgian" speech here and there; that formerly there had been for a while a "Pelasgian" settlement within a few miles of Athens; and further that the ancestors of the Athenians had been originally in some sense "Pelasgian" until "at the same time as they were transformed into Hellenes, they also learned anew the language."[13] From other statements of Herodotus, and also from the express testimony of Thucydides, it is clear that the name "Pelasgian" had already been commonly used as a general term for peoples who were pre-Hellenic, though not therefore necessarily aboriginal.[14] But it is also certain that among such peoples were included some who bore in Greek the same "Tyrrhenian" name as the people whom the Romans knew as the Etruscans in the region of middle Italy between the river Arno and the Tiber; and Herodotus and others believed that the Tyrrhenians of Italy were emigrants from Lydia and akin to the Lydian people or (since that people was composite) to some element in it.[15] Though little is known about the Etruscan language, it is at least certain that it is unconnected with any other language of Italy; that its alphabet, though generally similar to the Chalcidic or western class of early Greek alphabets, contains a few forms which are not Chalcidic but are found in the scripts of Lydia, Phrygia, and some early Greek cities of Asia Minor; that its vocabulary includes words resembling forms of place names in those southwestern regions of Asia Minor where the pre-Hellenic place names already mentioned occur; and that there is some resemblance between its grammatical forms and those of the Lydian language and perhaps also of some of the more ancient languages still spoken in and around the Caucasus.[16]

All this would not carry us far, but for the discovery of an inscribed stone in Lemnos, probably the tombstone of the warrior whose effigy is carved on it in armor resembling at the same time some early Greek armor, and the earliest representations of Etruscan armor in Italy. The inscription,

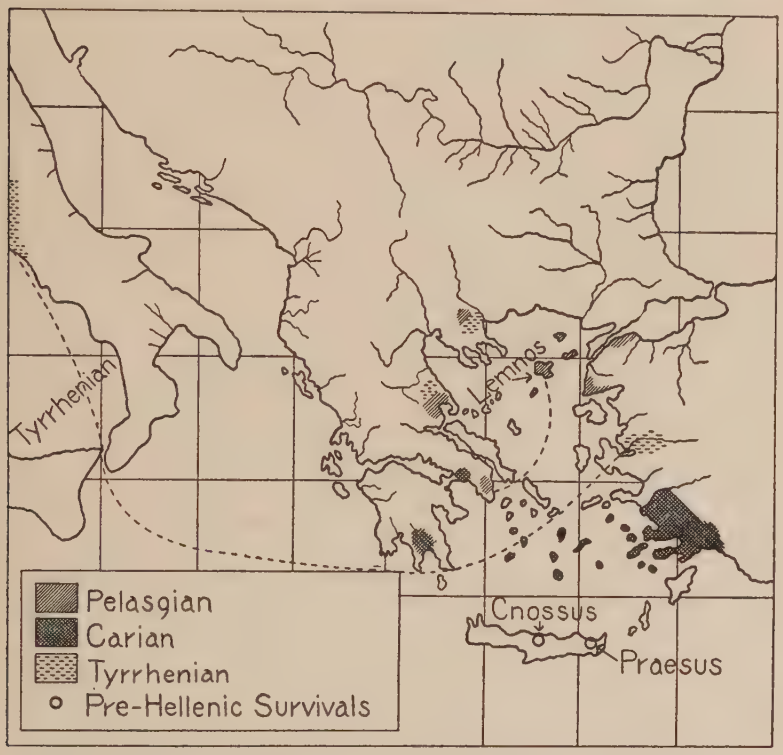


Fig. 4.—Geographical Distribution of Pre-Hellenic Peoples, and Survivals of Them in Greek Folk-Memory

which is in an early alphabet closely resembling early Etruscan letters, is now generally admitted to be either in a dialect of Etruscan or at all events in a closely related language.[17] There is therefore little doubt that at least one non-Hellenic language remained in use in the North Ægean until classical times, and as there is no reason to

regard the Lemnian inscription as akin to Thracian or Phrygian—the only languages introduced into this region as late as Greek, or later—it seems necessary to conclude that the Lemnian language is not only non-Hellenic but pre-Hellenic.

Secondly, short inscriptions have been found on the site of Praesus in eastern Crete, in an early Greek alphabet but not in any kind of Greek speech: it is not even certain that they are in any Indo-European language, and they show no resemblance to the Lycian language of the southwestern coast of Asia Minor, which is in much the same ambiguous position, though its script differs more than that of Praesus from ordinary Greek lettering.[18] Now of Praesus, Herodotus has a story[19] that its people, alone of all Cretans, refrained from joining a great oversea expedition to Sicily which he assigns to "the days of Minos," and thereby escaped destruction. As "the days of Minos" in Greek folk-memory represent at latest the earlier part of the thirteenth century (p. 321) and perhaps a hundred years earlier (since there are tales about two kings of that name), we have here a Greek attempt to explain why the people of Praesus were so different from other living Cretans; and as the Praesian inscriptions show that a non-Hellenic language remained in use there within Hellenic times, it seems to follow that this was also a pre-Hellenic language; though there is nothing to suggest that it was the same as that of Lemnos, nor any proof that either of them is the same as that of the Minoan inscriptions at Cnossus. In support of that alternative, there is only the widespread similarity of place names to suggest that at some time or other a single type or group of languages was rather widely spoken. That it was still in common use at the time of the introduction of Greek, seems to follow from the Greek borrowings from its vocabulary.

Thirdly, though it is rather a far cry from the Ægean to Cyprus, it is necessary for our argument to note, first

that the dialect of Greek which was in use in that island was long written not in a Greek alphabet but in a syllabic script like that of the Minoan inscriptions, and in part derived from it, as a few early documents show. Now though most of the inscriptions in this Cypriote script are in the same Greek dialect—to the peculiarities of which further reference will be made later—a few are in another language, which is certainly not Phoenician (the other common means of intercourse in the island in Hellenic times) but has not yet been identified with any other known language.[20] This evidence is only of interest in the present connection, because, though the unknown language may be that of the aborigines of Cyprus, there is nothing at present to show that it is not that of the Minoan colonists who came from the Ægean to Cyprus in the fourteenth century, and used there that intermediary script, already mentioned, which was borrowed from the Minoan and is ancestral to the Cypriote.[21] Consequently it is no longer permissible to assume, as has sometimes been done, that the people who introduced the Cypriote syllabary into Cyprus were also those who introduced the Greek language. It is indeed more likely, in the present state of the evidence, that the intermediary script was introduced by people speaking the Minoan language, and that it was later that Greek-speaking settlers, finding both Minoan language and Minoan script in the island, and having as yet no regular script of their own, adopted the Cypriote variety of Minoan script for intercourse in Greek. For this purpose, it must be admitted, this syllabary is very ill-suited; being contrived, like its Minoan prototype, for recording a quite different kind of language, in which every consonant was followed by a clearly pronounced vowel.[22]

From this survey of the slight and scattered remnants of pre-Hellenic speech in districts afterwards occupied by Greek-speaking people not much information is to be gath-

ered, until it is possible to read the Minoan documents of Crete. Of these, meanwhile, the chief significance is that the period which they cover is approximately known, and also the date at which this system of writing went out of use (about 1400 B.C.), in the collapse of the régime which employed it. This event does not necessarily date the first introduction of Greek speech into Crete, and still less (as the Praesian inscriptions show), does it imply the disuse of any older language.[23] It does however mark the close of a long period of essentially continuous development of material civilization, and the beginning of a period of successive disturbances which lasted for about four hundred years; nearly as long, that is, as the interval between the invasion of Gaul by the Germans of Ariovistus in 58 B.C. and the siege of Rome by Alaric the Goth in 408 A.D.

For survivals of the pre-Hellenic peoples of the North Ægean, Greek writers used, as we have seen, the tribal name "Pelasgian," and there is Homeric folk-memory of "Pelasgians" in Crete too, about 1200 B.C., speaking apparently a distinct language from that of the "Eteocretans" who seem to represent the older population of the east end of the island, round Praesus, and also from that of the "Cydones" whose name survived in that of Cydonia, in the west. But the commoner names for pre-Hellenic peoples in the South Ægean were those of the "Leleges" and "Kares." These also were certainly used in a generic and descriptive sense, but there were actually Leleges still in the fourth century, speaking a language of their own, and forming the serf population of the coast district of Asia Minor from the Maeander valley southward to the gulf of Ceramus; and their overlords, the historic Carians, had given their name to an even longer stretch of coast, as far south as the mainland opposite Rhodes, and also to a considerable distance inland. They still spoke their own Carian language in the country districts until the early days of the Roman Empire,[24]

but it already included many Greek words in the third century B.C. Of this Carian language, however, hardly anything remains except names of persons and places; but these exhibit that class of stems and terminations which has already given us our principal clue to pre-Hellenic speech in the South Ægean, and also others which recur in the Lydian and even the Mysian country farther north.

The Lydian language, represented by numerous inscriptions of classical date, is not yet fully understood. The belief of Herodotus that the Etruscans of Italy were of Lydian origin, compelled by famine to migrate at a period which he seems to regard as not long before the twelfth century, is confirmed by similarities of structure between Etruscan and Lydian "which cannot be accidental";[25] but other elements in Lydian grammar seem to be Indo-European, and probably the language is a mixed one. That there were at least two elements in the population of Lydia, as in that of Caria, is suggested by Herodotus' description, and also by the fact that in the Homeric *Catalogue*, which is in geographical order, the place of the Lydians is taken by another people, the Maeonians, whose name remained associated in classical times with a district of Lydia.[26] The significance of the mixed speech of the classical Lydians will be appreciated when we come to the history of the continental interior of Asia Minor. Similarly connected with those "Carian" survivals, and much better represented by numerous inscriptions in alphabets closely related with those of Greek communities, are the languages of Lycia, and other districts farther east, along the mountainous southern margin of Asia Minor as far as Cilicia and inland as far as the non-Hellenic language encountered by Saint Paul in Lycaonia.[27] But while these more easterly languages show general agreement among themselves they present fairly well marked differences from Carian and other varieties of west-coast speech; the frontier between the two

groups lying in the very rugged highland which separates the large drainage basins of the East Ægean from the smaller and more torrential streams which reach the sea east of the island screen of Rhodes and Carpathos. The Lycian language, it is true, shows some resemblances in detail with Greek; but in view of the persistent and apparently early intercourse between Lycian coast towns and Greek seafarers, and of the establishment of Greek-speaking settlements in Pamphylia immediately to the eastward, these may probably be ascribed to the introduction of Greek idioms, comparatively late, rather than to community of origin.[28] But, as in Lydian, the alternative of an early mixture of Indo-European and Old-Asianic speech is not quite excluded.

How far northeastward into Asia Minor these related groups of languages once extended, it is as difficult to determine as to discover their former range over the Ægean; and for a very similar reason. Place names, here too, indicate a wide early range; but in addition to the destruction and disturbance caused by the Gaulish invasion in the third century B.C., which established a Celtic-speaking Galatia on the central plateau, there is ample evidence from language to confirm the historical tradition that the Phrygian population, which the Gauls displaced, had not been long established there; that it had come thither from southeastern Europe; that the Thracians were laggard tribes of the same group who had stopped short in the Marmara region and west of it;[29] and that on the other hand the Armenian language, which displaced the older and quite different speech of the old "Vannic" kingdom as late as the seventh century, represents the high-water mark of this tide of European intruders.[30] With the European antecedents of these Thraco-Phrygian invaders we shall have to deal later when we come to the archaeological evidence; at this point it is sufficient to note that though this group of lan-

guages spread into Asia Minor from the European end, it belongs to the same eastern group of Indo-European languages as Sanskrit and Old Persian, not to the western group which includes as its nearest neighbors the northern dialects of Greek, including that of the Macedonians, who were coming in the fifth century to have a common frontier with the Thracians in the Strymon basin, owing to the rapid disappearance of the Paeonian tribes, who had hitherto occupied that region and held Macedonians and Thracians apart.[31]

We have now made a complete circuit through the regions immediately east of the Ægean, seeking for something more coherent than the survivals in loan words and place names, with which we began, to illustrate the distribution of languages there before Greek dialects began to spread. And in the center and northwest of Asia Minor we have found just such a situation as in Greece itself, with a comparatively recent group of Indo-European languages, Thracian, Phrygian, and Armenian, superimposed on languages and a culture more anciently established there. And some of these older languages clearly belong to the same group as those which are revealed by loan words and place names in the Ægean and perhaps also in the Greek peninsula itself. Is this however the whole story? The circumstance already noted that Thracian and Phrygian appear to belong to the eastern group of Indo-European languages, whereas Greek is of the western, suggests that it is not; and at all events makes it necessary to distinguish carefully between these two instances of Indo-European intrusion. Clearly it will help to define the problem which confronts us here, if we can form any conception of the course of events in Asia Minor, a larger, more continental area, more coherent as well as of simpler structure, than the shattered and partly submerged country west of it.

Fortunately here there is not only a large mass of documentary material of early date, at last decipherable; but, as now deciphered, this gives us an outline of historical events, very much farther back than any documentary record on the side of the Greeks.[32] The reason for this is simple; for whereas Ægean civilization devised a mode of writing of its own, to which at present we have no clue, Babylonian merchants established themselves in the heart of Asia Minor, at least as early as 2400 B.C., and their cuneiform writing was in time adopted for several of the native languages. The only very large series of documents from this region, the Hittite archives from Boghaz-keui in Cappadocia, belongs, it is true, to rather later times, and moreover does not yet give us the means to interpret the numerous monuments inscribed with pictorial signs, which are local and probably later; but the texts at present available are sufficient to establish a few very important points, more especially when account is also taken of Babylonian references to certain peoples of alien speech, still farther to the east.

The importance of this fresh source of evidence is best illustrated by comparison with what we have for countries and languages where it is not available. The earliest written examples of Latin which can be dated by their historical content belong to the third century B.C., and the unique "black stone" from a low-level excavation in the Forum is in letters derived from the Greek alphabet, and probably not earlier than the sixth. The earliest literary texts belong quite to the end of the third century. The earliest Greek documents only go back to the seventh or at most the eighth century, and the earliest extant compositions in Greek, namely, the Homeric poems, though preserved by their metrical form and the esteem in which they were held, in something like their original shape, refer mainly to events which Greek popular tradition assigned only to the early

part of the twelfth century; the poems themselves were believed by the classical Greeks to have been composed in the ninth.

In India, too, there is at present nothing but literary evidence of the same kind as the Homeric poems and far less easily dated, either by the form of the compositions, or by the coherence of the traditions they embody. On literary grounds, and mainly by estimates of the historical sequence of literary styles, which may however have been either slower or more rapid than is commonly supposed, the fifteenth century seems likely as a lower limit for the occupation of the Punjab by immigrants of Indo-European speech. But as the occupation itself was probably gradual, its beginning may have to be placed considerably earlier than this.

First Appearance of Indo-European Speech in the Near East

From the linguistic resemblances between Latin, Greek, and Sanskrit, it is certain that these, and other languages of similar structure distributed farther to the northwest, result from geographical spread and local modification of a kind of speech which once had a continuous distribution in some region north of the Mountain-zone. Into and through the Mountain-zone these several languages have been propagated, changing as they went. Now between northern India and Asia Minor, the diverging and then converging ranges of the Mountain-zone enclose the Iranian plateau, occupied still by Indo-European-speaking Persians, earlier stages of whose language are preserved in a simplified cuneiform script as far back as the sixth century B.C. Their great Achaemenid kings, Cyrus and Darius, in the latter half of that century traced their pedigree back to the latter part of the eighth, with obviously Indo-European names, in a highland principality among the great mountain chains

which rise immediately east of the Persian gulf and the Tigris valley. It is also late in the eighth century that the Assyrian king Sargon encountered in the Median section of the same highland a chief whose name Dayakku represents the Deioces whom Herodotus describes as the founder of the Median kingdom.[33] This name too appears to be Indo-European.

Now Babylonia, as we saw from its geographical position at the junction of the Mountain-zone and the Arabian slab of the great southern flat-land, and from the intermixture of "brown" and "Armenoid" breeds, to which it owed its earliest culture, lies in an exceptionally favorable position for recording the linguistic history of this frontier region, and had a very ancient system of writing in which to do this, first in Sumerian, then in Semitic language.

About 2000 B.C., Babylonian documents begin to record a long gradual expansion of alien tribes from beyond the Tigris, originating in or beyond the mountains, and by about 1760 Babylonia itself became subject to the "Kassite" dynasty, whose official language is neither Semitic nor Sumerian, nor indeed of any recognizable affinity.[34] But as the Kassites introduced the horse into Babylonia, and used it, like the Aryans who were bringing it at about the same time into northern India, not for riding but for drawing wheeled vehicles, it is inferred that they had been in contact, before arrival in Babylonia, with people of Aryan culture and speech. More than this, among the names of Kassite kings are some which appear to contain Indo-European elements, as though they belonged to families which had once used Indo-European speech, but had lost it as their official language, through assimilation to the people of Kassite speech whose movements they were now directing. Some Kassite deities too seem to have Indo-European names.[35] We shall have occasion later to discuss other instances of such a change of language (p. 107). In medieval

times we may compare the fate of the Scandinavian Northmen of Normandy; they often bore pagan Norse names, long after they had become Christian; they invaded England speaking the Norman French of their vassals in Normandy; but they found themselves obliged, before long, to make use of the English speech of their new subjects across the Channel.

Further evidence of movements of the same kind is found in a treaty about 1360, between the kings of the Hatti folk, then dominant in Asia Minor, and of the Mitanni people in northern Mesopotamia, some of whose chiefs bore Aryan names, though the Mitanni language is unrecognizable. This treaty is sanctioned in the names of Babylonian and Mitannian deities, and four of the eight Mitannian deities have the names of Aryan gods, Indra, Varuna, Mithra, and the twin Nasatya, all familiar from the earliest Aryan literature of India. Further, the Mitanni people had a grade of fighting men called *marianna*, which seems to represent the Sanskrit word *māryā* for "young warriors"; and a Mitannian document dealing with the management of horses, in the same Hatti archives, used Aryan words for the numerals 1, 3, 5, 7, and 9.[36]

In this connection it is to be noted that it was in the obscure period between 1900 and 1600, when the Kassites were establishing themselves in Babylonia, that the Egyptians became acquainted with the horse through conquest by a foreign people, the Hyksos, who certainly retreated eventually into Syria, though it cannot yet be proved that they came thence. But also about 1400–1350 there were local princes in Syria and Palestine with Aryan names, one of which, Biridasva, seems to contain the Sanskrit *asva* "horse."[37] As there is at present no evidence that Indo-European languages were commonly spoken either in Syria or in Mitanni-land, probably these horse-using, Aryan-named leaders were of different origin from their followers, like the Kassite kings in Babylonia.

As these Indo-European names in western Asia show greater likeness to those of Aryan India than to the Iranian speech of the later Medes and Persians, it has been inferred that Iranian and Aryan speech had not yet diverged. This, however, is not necessary, as may be illustrated from the queer geographical distribution of other intrusive languages, such as the Teutonic and Slavonic groups in Europe. All the Indo-European languages hitherto noted, however, belong to that eastern division of the whole family, in which, for example, the word for "hundred" has an *s*-sound as in *satem*, not a more or less guttural sound as in Latin *centum*, Greek *hekaton*, or German *hundert*.

Now comes the notable discovery that a language of this western "*centum* group" was in official administrative use from before 1500 B.C. till about 1200 B.C. in the so-called "Hittite Empire" of the Hatti folk in Asia Minor. But here the linguistic situation is quite different from that of Mitanni-land or the Kassite régime, for neither the Hatti themselves nor their principal vassals spoke *Našili* (as the writers call this official language) and even the Hatti names of gods and kings are not Indo-European. This *Našili* idiom itself, though Indo-European in structure, contains many alien elements in its vocabulary; a notable point of similarity with Greek, and of contrast with the languages of the eastern division and also with Latin and other European groups, which have all retained a considerable proportion of their original outfit of words.

As *Našili* is a *centum* language, it stands rather closer phonetically to Greek and other western languages, than do Phrygian and its derivative Armenian, which eventually superseded it in Asia Minor; and there is no evidence that there were any Phrygian-speaking or other *satem*-using peoples in Asia Minor as yet. Other evidence (besides its western affinities) that *Našili* did not come into Asia Minor from the east, is supplied by its geographical position, and

by the quite different relations between language and personal names, in the Hatti, the Mitannian, and the Kassite régimes. The possibility cannot be excluded that it came in from the north by way of the Caucasus, but the circumstance that Armenian, which superseded the older Vannic language there in the eighth or seventh century, seems to be derived from Phrygian, makes this unlikely; and the only other route from the northern flat-land, where all Indo-European speech seems to originate, is by way of the Marmara region.

The Hatti, like the Kassites and Mitannians, used horse-chariots in war but did not ride.[38] And it should be noted here that in Greek lands too, as throughout the Ancient East, the earliest evidence for horse-*riding* as distinct from horse-*driving* in war chariots, is from monuments of the Early Iron age, certainly not earlier than about 1000 B.C. and probably later; also that the earliest horse-riding peoples in the Iranian region are the historical Medes and Persians, of whom little is known before the widespread excursions of nomad horsemen from beyond the Caucasus in the early seventh century. In the Ægean, the earliest representation of the horse is on a seal impression from Cnossus, showing that the animal was being transported oversea about 1500 B.C.; it was in use in Crete as a beast of burden soon after; and for chariots on the mainland as early as the "fourth shaft grave" at Mycenae and the Vaphio tomb.[39] In Homer, horses are driven, but not ridden except by an acrobat; even in the eighth or seventh century, though warriors had begun to ride to battle, they dismounted to fight.[40]

The historical context, in which the *Našili* language appears, deserves attention now, because it supplies both analogies and contrasts with the circumstances in which we first detect Greek-speaking people in Greek lands. Documents from Cappadocia, in Babylonian script and language, reveal a flourishing business community there, about 2400

B.C., in frequent intercourse with the mother-country of these merchants.[41] In these letters, persons are mentioned whose names resemble later Hatti names; but there is no reference to such a political régime as the Hatti eventually created there. About 1950 B.C., however, Babylon itself was invaded by Hatti folk; and as this raid immediately preceded (and probably facilitated) the Kassite conquest of Babylonia, and was about contemporary with the Hyksos conquest of Egypt, it seems to have been part of the same great series of disturbances, though it did not therefore necessarily proceed from the same quarter as the Kassite inroad.[42] There is also reason to believe that Egypt had some experience of Hatti folk in this disturbed period.[43] If the leader of the Hatti attack on Babylon was the king Mursil, whose account of such a raid has been preserved, the pedigree of the Hatti kings goes back beyond 2000 B.C.; for Mursil was fifth in descent from Tlabarnas. Even if this Mursil was some later king, he must nevertheless have been a predecessor of Dudkhalia, who reigned about 1450 B.C., and is succeeded by known kings until about 1200 B.C.; and consequently the date of Tlabarnas can hardly be later than 1600 B.C.[44] But this doubt only affects the duration of the dynasty; it does not alter the fact of Hatti aggression about 1950 B.C., nor the historical context in which it occurred. And we shall see reason, in Chapter V, to accept as historical the arrival of fresh people in Asia Minor from the northwest, about the same time as the Kassite inroads from the northeast, and to identify them with those who devastated the "second city" of Hissarlik, leaving some of themselves among its ruins, as we have already seen (p. 51).

There was therefore a period of at least one century, and probably of four or five, between the establishment of the Hatti régime in Asia Minor, and the first historical encounter between the empire of Dudkhalia and that of Thothmes III of Egypt, about 1470 B.C.;[45] and we have

next to enquire what conclusions may be drawn from these facts, as to the peculiarities of the *Našili* language, and as to the origin of Greek, which is eventually found established within the next large geographical region west of the Thraco-Phrygian.

The Conservation and Propagation of Languages

Most of us are so generally accustomed to regard language as a means of intercourse and mutual understanding, especially with a view to common courses of action, that we are liable to underestimate the importance of a difference of language as a barrier against such cooperation. Yet in early times especially such linguistic frontiers were of the greatest importance and were, moreover, often determined by much slighter differences of speech than those which distinguish the national languages of modern political and business life. For one of the chief uses of speech in primitive society is as a *shibboleth* to distinguish kinsman from alien, friend from foe; as a *cipher* to conceal ideas and information from outsiders, while conveying them to the initiated. Among ourselves too this is one of the functions of social or professional slang, to detect or to foil interlopers; and the rapidity with which such a jargon changes is a warning, not to require too long periods of time for linguistic changes within small and highly organized communities, confronted with rapid changes of outlook or fortune. Language indeed shows less "what to do" than "how to do it": what has to be done is determined, quite independently of vocabulary or grammar, by the hard facts of environment and the struggle to maintain life. A language may for example contain no word for "salt," or "the sea," or "beech trees." Drive those who speak it, however, into salt marsh, or a coast district, or a beech forest, and they soon find means to describe what they are daily seeing and using. What keeps language uniform between distinct communities is

habitual intercourse and common needs, such as those which link nomad societies over wide areas of grassland, or trading communities on the shores of a navigable sea. Standard languages, too, such as the Greek *koiné* of Hellenistic times, arise as the result of such intercourse, especially if this extends to the cultivated and literary classes who (as in Greece) are not always the most adventurous.

On the other hand, languages, however uniform before, easily break up into dialects when intercourse is obstructed by natural or political barriers; most rapidly of all, when spontaneous changes of intonation or idiom from one generation to another are emphasized and supplemented by the efforts of aliens to speak a tongue not their own. Such aliens may be of two kinds; the older population of a district occupied now by invaders whose language is accepted and acquired by the conquered; or the invaders themselves, if it is they who accept the language of those among whom they have come. What determines the survival or extinction of a language in such an event, it is not easy to say. Important factors are (1) the rigidity and exclusiveness of the social structure on either hand, (2) the amount, and still more the mode and kind, of intercourse, and especially of intermarriage, between the two sets of people, (3) the relative potency of the two civilizations, as well as (4) the utility, and the adaptability, of the competing languages themselves, under actual conditions of use.

Obviously change of circumstances produces different results, according as the transference of those who speak it from familiar to unfamiliar surroundings is effected by migration or by the intrusion of an alien language into their midst. Migration again may result either from the advance of invaders and conquerors into fresh country, or from the retreat of expatriated refugees, or very commonly from both experiences combined, when desperate exiles carve out a home for themselves in their turn, at the expense of a third party.

Most favorable of all to the conservation of language is the maintenance of the social structure in unimpaired rigidity and exclusiveness, for example in a close militant aristocracy such as that of the Aryan invaders of northern India; whose speech, in the older and even in the later phases of Sanskrit, preserves many characters which are lost in other Indo-European languages. Here the very contrast between the customary mode of life of the invaders and their new geographical circumstances—more particularly the social structure and economy of indigenous societies around them—led to scrupulous and even superstitious enforcement of practices which had lost their original use and meaning. The same was long the habit of the Israelites after their forcible occupation of Palestine, with the result that Hebrew retained, like Sanskrit, an exceptionally archaic appearance, in comparison with the speech of other Semitic peoples less careful of ancestral habits and beliefs. Where there is much intermarriage, on the other hand, between the invaders and the old population of the country, the mother's language has a good chance of being perpetuated as the speech of daily life, though that of the fathers may be retained for administrative purposes, as long as their political organization remains efficient. In the "scribes' language" of London, for example, they write *honi soit qui mal y pense*, and *le roy le veult*, and issue a *congé d'élire*.

Applying these general considerations to the special case of the Hatti folk of Asia Minor, we note that some centuries after the beginning of their régime they were employing for official correspondence what they called "our own language" —or "the scribes' language"—which is essentially Indo-European, though with a very corrupt grammar, like pidgin English; while among themselves they spoke and wrote (in the same Babylonian script) one of the local languages of Asia Minor, and their provincial dependents also had half a dozen languages of their own. We infer—quite apart from

any historical records—that the Hatti folk themselves are invaders, originally of Indo-European speech, but that they have intermarried extensively in Asia Minor, acquired the home language of their women-folk, and given native names to their kings, while continuing to employ their original speech in official correspondence, and forcing their subjects to do so.

In such artificial circumstances, it is not to be expected that a "scribes' language" will maintain itself unaltered. But what happens in any such predicament, depends on the relative advancement of the two civilizations, indigenous and intruded. When the civilization of the conquered people is the lower, the vocabulary of the conquerors is likely to remain in use, for it expresses ideas and needs on which they are in a position to insist, but its grammar is liable to be disintegrated through the conqueror's tolerance of slipshod performance on both sides. Examples are pidgin English, babu English, and the Romance languages, in comparatively modern times; and Celtic in ancient Europe. The maintenance of Arabic over the whole extent of Arab conquests as an official and commercial language, with progressive corruption from east to west in North Africa, among peoples who formerly spoke either Berber or Latin, illustrates the same changes, less far advanced. Sanskrit, preserved as a literary language alongside of numerous regional derivatives more or less profoundly modified, occupies an intermediate position between Arabic and *Našili*.

When, on the other hand, the civilization of the aborigines is the higher, the invaders have to adopt many words for unfamiliar practices and objects, though they may keep their grammar with only slight losses and simplifications. The best modern example of this is Turkish, which retains almost unaltered the structure which the Turkish invaders brought with them from Turkestan, but has incorporated many Persian, Arabic, Armenian, Greek, Romance, and even English and Teutonic words, from the more civilized

peoples with whom conquest and commerce brought into contact first the Seljuk, and later the Ottoman Turks. It was probably only the accident that the official classes were polygamous that prevented Turkish from becoming another *Našili*, and from being superseded, in the Byzantine provinces by Greek, in the Saracen provinces by Arabic, as the language of Turkish children, according as they were brought up by Greek-speaking or Arabic-speaking mothers; but while Turkish grammar survived, the vocabulary, as we have seen, reflected the confluence of these women's cultures in the harem, where a Turk had to be pleased if possible, but understood at all costs.

Now we have seen already that this is the type of the linguistic change which has befallen not only *Našili* but also Greek, and the conclusion follows that those who established *Našili* as a *lingua franca* in Asia Minor, and also those who brought primitive Greek into what thereby became "Greek lands," were themselves comparatively uncultured, but found themselves confronted by a civilization already mature and elaborate, with words of its own for all sorts of things unfamiliar hitherto to the Greek-speaking or *Našili*-speaking immigrants. From this it follows further, first, that those who brought the Greek language with them did not come into contact with Ægean civilization till that civilization was already well matured—and for this (as we shall see later) the archaeological evidence supplies a fairly detailed chronological scheme—and next, that the Greek language was itself also already well matured, and differentiated from other Indo-European languages, before those who spoke it came into contact with this higher civilization. For example, Greek has not only acquired an alien word *thalassa* for "the sea," but had already lost its inherited Indo-European word for any large sheet of water; otherwise it would have had no need for a loan word. From this it seems a necessary conclusion that Greek-speaking people

had passed through a distinct phase of experience in which they were quite out of touch with any large water basin; though as they retained original words for "boat" and "oar" and "fish," they clearly were not without continuous acquaintance with considerable streams.

Not a little depends on the quality of the languages themselves, and the stage of development and degree of utility attained by each when they come into practical rivalry. Here Greek, like Turkish, had the supreme advantage of an unusually complete and efficient verb, and a system of case-endings, to modify substantives according to their place in the sentence. It is a primitive character in both instances, and in Turkish we know the circumstances which conserved it; very rapid progress from the original "home" of the people; then long seclusion, in an upland district of western Asia Minor; then rapid expansion again, this time among people of far higher material and intellectual culture, but without the close tribal organization which made Turkish conquests easy. On the other hand, the ruinous state of *Našili* grammar, like that of English, points to a long period of exposure to competing cultures and political emergencies, and is in the strongest contrast with the remarkable conservation of the grammatical structure of Greek, and of the tribal substructure of Greek political communities.

We have seen already that the *Našili* language, like Greek, appears to belong to the western or *centum* group of Indo-European languages. But in historic times there lay between the regions in which *Našili* and Greek were respectively established, a group of languages, of which Thracian and Phrygian are regarded as typical, belonging apparently to the eastern or *satem* group. That these languages became established on either side of the Marmara region at a later period than *Našili* and Greek, is probable from their geographical position in the first place, and

secondly from the connection between Phrygian and Armenian; for Armenian only superseded the older Vannic language of the highlands round Mount Ararat between the eighth and the seventh centuries B.C.[46] If then it is possible to determine more precisely when the Thraco-Phrygian group was being established where we find it in historical times, we have a lower limit of date for the introduction of Greek speech into Greek lands. And this brings us to a second aspect of the question with which we are now concerned. How (that is) did it come about, that of these two "western" languages, *Našili* and Greek, the former, after a comparatively brief though brilliant career as the official speech of the Hatti régime, faded out so completely from Asia Minor, whereas Greek, after a long period of obscurity, dominated eventually, and in the form of a complex group of dialects, the Greek peninsula and the Ægean island-world? How was it also that, whereas Greek maintained itself as far north as Thessaly and Macedonia, against repeated aggressions from Thrace, the languages which succeeded *Našili* as the dominant means of communication in central and eastern Asia Minor belonged, like Thracian, to the "eastern" variety of Indo-European speech?

Subsequent History of the Hatti Régime

It is not until the Eighteenth Dynasty of Egypt had extended its dominion far into Syria that the Hatti folk appear as a "great power" in history. By about 1470 B.C. their king Hattušil I and his son Šubbiluliuma made conquests in southern and eastern Asia Minor, which threatened the Mitanni kingdom, but then sent complimentary gifts to Thothmes III in Egypt, to avoid complications; for Egypt was supporting Mitanni against Assyrian attack from the east. There was a treaty about a century later with Amenhotep IV (Akhenaten) of Egypt, which was quoted in still later negotiations; but Hatti aggressions went on while

Egypt was recovering from the disorders of Akhenaten's reign; treaties with Harmhab and Seti I were made and broken; and there was open war with Rameses II, of which a principal incident was a great battle at Kadesh in 1288. Then suddenly, a great reconciliation between Rameses II and Hattušil II, about 1272, marks the summit of prosperity

Fig. 5.—The Greater Powers of the Near East, 1500–1200 B.C.

and good will around the eastern end of the Mediterranean; in 1259, the king of Hatti-land paid a state visit to the Egyptian court.[47]

But there was a cloud on the western horizon. The wide extent of Hatti dominion eastward is demonstrated by the numerous documentary references to negotiations and wars with Mitanni, in the fifteenth century, and by correspondence about a disputed succession in Babylonia about the time of the great treaty with Egypt. This treaty fixed the

Hatti-Egyptian frontier by agreement in the Lebanon district of Syria. Westward the references to districts and peoples are less easy to identify, because here there is neither Egyptian nor other oriental confirmation of the references to western events in Hatti documents. It is certain that the Hatti kings claimed general control over Asia Minor as far as the coast districts on the south and southwest. But this control was disputed by a considerable power on or beyond the sea coast; moreover in the northwest there was a district in Asia Minor itself which was not under Hatti dominion. This district was called *As-su-va;* it included a considerable city *Ta-ro-i-sa*, and in or near it was a place or district called *La-as-pa.* The coincidence of these three names with Asia, Troia, and Lesbos is not in itself convincing (see note on p. 165).

But the name Asia, which had become the general name for the continent east of the Ægean among the Greeks of classical times, must have begun as that of some particular district of it with which Greek-speaking peoples became acquainted early, and in which they had some early and special interest. Now in the Homeric poems, though the name Asia is not used in a general sense, there is mention of an "Asian meadow" along the Caicus river, of a chief called Asios, "man of Asia" and a whole family of "men of Asia" who all came from the Asiatic shore of the Hellespont, a few miles northeast of Troy, and of another "man of Asia" who was brother-in-law of Priam and lived in Phrygia in the Sangarius valley.[48] The value of Homeric testimony for the geography or history of the thirteenth or fourteenth century we shall have to discuss later: for the moment we have only to note that the earliest Greek use (whatever its date may be) of the word *Asia* and its cognates is in reference to this far northwestern district of the "Asiatic" continent of later times: also that the later the date of these passages themselves, the more significant they are for still later extension of the meaning of the word *Asia.*

As proof of the importance of Troy at all periods with which we are concerned, we have its archaeological record; and, for its exceptional importance in the fourteenth and thirteenth century, the complete reconstruction of the site, in what is known as the "sixth city," with a massive fortress wall in a peculiar style of construction only known otherwise from fortresses of the same period in central Greece.[49]

For Lesbos, we have again Homeric testimony, fully in accord with the geographical position of the island, that its capture and occupation by the forces of Agamemnon was a strategical preliminary to the siege of Troy itself.[50] Here again, Homeric testimony by itself proves nothing but the opinions of a Greek poet, of early but uncertain date, as to the politics and strategy of bygone times.

Quite independent of this is the contemporary record of the Hatti king, Muršil, nearly a century and a half before the traditional date for the Trojan War, that *La-as-pa* was being attacked by an enemy chief, *Tavagalavas* son of *Antaravas*, who is described as an *Ayavalas*, and as ruler of a state called *Ahhiyava*.[51] Other references to this *Ahhiyava* show that its headquarters was oversea, for its chiefs interfere later with Hatti interests in the southwest and south of Asia Minor, and in the district of Alašya, which contemporary Egyptian documents show to have included all or part of Cyprus (where there was a sanctuary of Apollo Alasiotes in classical times), and probably also the coast of Syria north of the Orontes.[52]

The names Tavagalavas, Antaravas, Ayavalas, and Ahhiyava resemble words of Indo-European structure; and when we come to examine Greek traditions about the generation which lived about 1330, we shall find mention of a chief Etevokleves (in later Greek, Eteocles), son of Andrevas (Andreus) the founder of Orchomenus in central Greece; of a great family, "sons of Æolus" (Aivolos) widely dominant in neighboring districts; of a district, Achaea (also

called Phthia) south of Thessaly whence the "sons of Æolus" spread; and of the settlement of a "grandson of Æolus" in Lesbos itself.[53] Later, there are "Achaeans" still more widely distributed, and forming the greater part of the forces of Agamemnon in the Trojan War. Whatever the date and historical reality of that war, there was a powerful state called "Achaea" somewhere west of Asia Minor, more than a century before it, including "Æolian" people, and at all events naming its chiefs in some sort of Greek. Muršil's son, Mutallu, who reigned from 1329 to 1290 B.C., mentions a chief Alakšandu of Uilusa, in or near southern Asia Minor.[54] These names too fit closely those of Alexandros, son of Priam king of Troy, though this Paris (to use his more familiar name) belonged to the generation of 1200 B.C.; and of Ialysus, one of the three cities of Rhodes which sent contingents to help the Achaeans in the Trojan War, and was an important Mycenaean settlement, as its rich tombs show, from about 1400 B.C. to the close of the Bronze Age. No one named Alexander, however, was remembered in connection with Ialysus.

A generation later, the allies of the Hatti in the Syrian campaign of 1288 include men of Ilium (the Homeric synonym of Troy), Dardanians, Lycians, men of Pedasus (a town name several times repeated in the western coast districts), Cilicians (who in the Homeric *Catalogue* live south of Mount Ida), Mysians, and Maeonians.[55]

We have now ascertained what were the westward anxieties of the Hatti folk, which contributed to the great settlement of old quarrels with Egypt in 1272, and it is entirely in accord with the state of things thus indicated, that in the same year the Hatti king Hattušil II, who made that treaty, had to send a nephew into exile, and in the next year had trouble with the oversea folk of Ahhiyava.

Another generation later, the Hatti king Dudkhalia III had to protect himself, about 1250, against an attack by

Attarissyas, ruler of Ahhiyava, on his own dependency Zipparla, which was apparently in Caria, and made a treaty about this matter with his own friends or vassals in Syria. At this time Attarissyas (whose name recalls that of the traditional Atreus, father of Agamemnon, a great chief among the Achaeans of southern Greece in the generation of 1230) had a base of operations in Pamphylia, on the south coast of Asia Minor. He also made an attack about 1225 on Alašya, which (as we have seen) was either in Cyprus, or on the coast of north Syria, or included both.[56] In another context, Dudkhalia accepts the alliance of Attarissyas, and grants to him and his associate Biggaia the title of *kuirvanas*, corresponding closely with the Homeric word *koiranos* "lord," and probably connected also with the later Greek *tyrannos* "despot" which was believed to be a Lydian word or title, and was still used in the sixth century in the Greek cities of that coast, for the vassal or any kind of local representative of a suzerain, in a different political sense from that which it bore in Argolis and Attica at that period.

At first sight it may seem unimportant whether "Attarissyas of Ahhiyava" is to be identified with Atreus or with Perseus, and whether his career falls within the generation of 1230 or that of 1300. But in the thirteenth century events moved rapidly, as we are already able to perceive, and between those generations the whole outlook of the Hatti régime was revolutionized by the intervention of a fresh group of peoples. In regard to these, too, we are only concerned with two points;—their names, in so far as these are any guide to their speech and linguistic affinities; and their movements, so far as these may be ascertained from documentary evidence, and may help to explain the eventual distribution of the Greek language, and its linguistic neighbors in historical times. Only when this part of our enquiry is completed, are we justified in raising two further questions,

"What is the value of Greek folk-memory about these peoples and their early movements?" and "What is to be learned from archaeological evidence about their culture, and their relations with the forefathers of the classical Greeks?"

Egyptian Evidence as to Oversea Peoples

At this point, evidence comes once more from the Egyptian side, and again some retrospect is necessary, if the situation is to be understood. From 1500 onward, the Syrian conquests of Thothmes III had brought Egypt into contact with a group of maritime peoples, the Keftiu, of whom one of the principal countries lay somewhere north of Phoenicia; other districts were Alašya, already mentioned, and Asi, recognizable in the Greek name "Axios" for the river Orontes, which is "Asi" in modern Arabic too. From these peoples Thothmes III received rich gifts of gold and silver vessels in various foreign styles, some identical in shape and closely comparable in decoration with gold cups from Mycenae, and from Vaphio in Laconia, independently dated earlier than 1400.[57] As Mycenaean settlements were established in Rhodes and Cyprus about this time, it is easy to see how such works of art came into Egyptian hands; less easy, however, to discover the precise province and functions of an Egyptian "governor of the islands" who received from Thothmes III a gold bowl with complimentary inscription rehearsing this title;[58] or the meaning of an allusion to "Danaan islands" in a hymn of this period.[59] If we may infer direct political as well as economic dealings between Egypt and the South Ægean as early as 1500, the legends of Danaus and Ægyptus acquire new significance, which we shall have to discuss in Chapter VI. All intercourse between Ægean and Nile earlier than the eighteenth dynasty belongs to another aspect of our subject, and is reserved for Chapter V.

After the reign of Amenhotep II, who died in 1420 B.C., there is no further reference to the Keftiu, but now there are other, less friendly people afloat,[60] piratical Lykki, Shardana, and Danuna, in the reign of Amenhotep III and IV, and Egyptian curiosities and other loot, sometimes marked with the names of these kings, begin to appear in Cyprus, in Rhodes and Crete, and at Mycenae.

From all these Egyptian allusions, which begin considerably earlier than the Hatti documents already noted, it is clear that we are concerned with no momentary incursion, but with a whole period of intercourse between Egypt and oversea peoples, beginning about 1500 and lasting till after 1200; and further, that this period included three distinct phases; from 1500 to 1420, friendly relations with Keftiu and remoter "islanders"; from 1420 to 1220, growing inconvenience from piratical adventures; from 1220 to 1190, repeated peril from violent and concerted mass movements. As to the source of the trouble we have already some clue from the doings of Tavagalavas about 1330, on the west coast of Asia Minor, and from those of Attarissyas about 1230, in Caria, Pamphylia, and Cyprus, within a few years of the raid of Akhaiwa-sha and Libyans on the Western Delta in 1221.

Among the numerous "lords of the north" who harried the coasts of Egypt and Syria, we are only concerned in what follows to note those that bear recognizable Ægean names.

The kings of Egypt, like Roman emperors in similar difficulties, "set a thief to catch a thief," enlisting Shardana, and probably also Tursha sea-raiders,[61] as coast guards. To such foreigners, settling down within Egypt itself, belong the poor graves with local imitations of very late Minoan pottery, from the Fayum district. A little later we have the coffin of a man named Amen-tursha, who seems to have been one of them.

Long afterwards, the Greek historian of Egypt, Manetho, identified one of the numerous rulers of Egypt, in the anarchy which followed the death of Amenhotep IV, with the Danaus of Greek tradition, who quarreled with his brother Ægyptus and was pursued by him as far as Argos, whence the family had come two generations before. What Egyptian evidence Manetho had for this story, is not now known: but the name Harmais which he gives to the Egyptian king who restored order in Egypt corresponds with that of Harmhab, the military adventurer who ended the period of confusion and founded the Nineteenth Dynasty in 1350,[62] and it is quite likely that one of the incidents of that obscure period may have been the expulsion of some corps of Danaan mercenaries who abused their position and had to be chased back home by Egyptian forces. The Greek traditional date for the arrival of Danaus in Argos from Egypt is rather earlier, and contemporary with the first mention of Danaan marauders in the correspondence of Amenhotep III. Perseus, a distinguished member of the clan, carried off a native princess from the coast of Palestine in the generation of 1300. The Danaan dynasty ruled in Argos till the generation of Atreus the father of Agamemnon. Thus even if we had not the Homeric description of Agamemnon's forces indifferently as "Danaan" and "Achaean," we should be able to place "Danaan" sea-raiders alongside the rulers of Ahhiyava as a growing danger to the coasts of the eastern Mediterranean.

Egyptian and Hatti sources of information now interlock. Within a very few years of the raids of Attarissyas of Ahhiyava on Caria Pamphylia and Cyprus, Merneptah, the successor of Rameses II, had to repel, in his fifth year, 1221, a great raid of land and sea peoples together, on the western edge of the Delta. The land-folk were mainly Libyans, one of whose principal tribes, the Meshwesh, seems to be the "Maxyes" of Herodotus. Among their allies are Lykki, Shardana, Shakal-sha, Tur-sha, with whom we are already

acquainted; *Akhaiwa-sha*,—clearly the people of Ahhiyava, with the termination *-sha-* added which represents the *-assos -issos* ending of many place names in the Ægean and southwestern Asia Minor. In Greek tradition, which, as we shall see in Chapter VI, stands in closer relation to

Fig. 6.—Principal Movements of Peoples in the Near East, 2000-1150 B.C.

historical events than has been commonly supposed, this is the generation of the voyages of the Argonauts, who in addition to their famous raid along the north coast of Asia Minor made another to the coast of Libya and buried one of their crew there.[63] It is also that of the adventures of Bellerophon, an exile from Argolis, who fought in Lycia with the Solymi of the interior, and was last heard of stranded on the "Aleian plain" which is in lowland Cilicia.[64] In this generation, too, the swineherd Eumaeus was carried off from his father's palace in a far country which he calls Syria, and was sold to Laertes, father of Odysseus, in Ithaca. His captors are described as "redskin" seafarers, of the kind afterwards identified with Phoenicians; and his nurse tells

them the plausible story, that she too had been carried off by Taphian pirates, of whose bad doings on the west coast of Greece there are other tales: Eumaeus himself afterwards bought a man from them.[65]

A generation later, again, Egypt fell into momentary confusion and there was a change of dynasty, perhaps more than one. How much of the trouble was due either to sea-raiders or to foreign mercenaries, we do not know; but three bronze swords have been found in Egypt of a fashion which originated in the Hungarian plain, and is found in scattered groups in Italy, and occasionally in Greece. One of them is cast in a mould formed on the broken pieces of a similar sword, clearly for the use of someone who was far from home and had no other means to replace the weapon of his choice; another bears the royal mark of Seti II, which not only dates the whole series, since this king only reigned from 1214 to 1210, but shows that he followed precedent in taking sea-raiders into his own service.[66] We have probably here a clue to the sources of the new naval force with which only a few years later Rameses III defeated the worst inroad of these people in the early years of his reign; and also valuable commentary on the "old soldier" tales told by the hero of the *Odyssey*.[67] Here we have all the phases of a sea-raider's career.

Then, just after 1200 B.C., the storm burst. In 1194, during a fresh Libyan war, ships of the Pulisata, Shardana, and Zakkaru, "peoples of the north," entered the Nile mouths, and were captured there. In 1190 Rameses III is more explicit still:—"the peoples of the north in their islands were in agitation, uprooted in the storm . . . . not one held his place before them. Their chief powers were Pulisata, Zakkaru, Shakal-sha, Danuna, and Uasha-sha; these lands were held together in a single league."[68] It was not a mere excursion of pirates, but (like the Libyan invasion of 1221) a concerted movement by land and sea together.

This time however the land attack was from the north, through Syria, and the invaders had come to stay, for they had with them women and children, in great bullock wagons. As the nomad Bedawin of north Arabia never used wheeled transport, and as there are Hatti folk among these invaders, though no longer in command, it is clear that they came from the northwest, out of Asia Minor; consequently that the danger foreseen by Hattušil II, when he made his treaty with Rameses II in 1272, had been realized. The "Hittite Empire" in Asia Minor had collapsed before an inroad from beyond; and indeed the Hatti archives at Boghaz-keui come to a sudden end, a few years before 1200.

Now a movement which could plan a concerted attack of this magnitude, with a rendezvous on the Syrian coast, between a land force moving across the Taurus mountains, and a sea force including Pulisata, Shardana, Shakal-sha, Danuna, and others with the same names as the seafaring allies of the Libyans a generation before, implies a vast confederacy, and skilful leadership: as Rameses III says of them "their lands were held together." No Achaeans are mentioned now; on the other hand the Shardana may be provisionally recognized in the name Sardis in Lydia, the Shakal-sha in Sagalassos in Lycia; the Uasha-sha, in Oaxos in Crete and Oassos in Lycia; the Zakkaru perhaps left their name in Zakro, a modern district and port at the east end of Crete, and in the Teucrians who are traceable in Crete, in the Troad as immigrants, and for some while afterwards as pirates on the coasts of Palestine and Cyprus. The royal house of Salamis in Cyprus in the fifth century claimed Teucrian descent.[69] A small but important group of identifications seems justified by the proximity of the names in the lists of Rameses III: Salomas-ki, Kathian, Sali, Ithal, can hardly be other than Salamis, Kition, Soli, and Idalion, four of the principal cities of Cyprus in later days.[70]

Now this is the generation within which fall the voyage of Paris, on which he not only carried off Helen from Sparta, but also brought back from Sidon skilled weaving women as a present to his mother Hecuba at Troy;[71] the voyage of Menelaus, which included Cyprus, Sidon, Phoenicia, Egypt, Libya, and another people, the Erembi, whose name probably covers that of the Aramaean nomads who had been intruding into Palestine from beyond Jordan during the thirteenth century;[72] and the "old soldier" yarn of Odysseus (p. 123), that on returning from the Trojan War he could not settle down in Crete, but fitted out a ship and raided the coast of Egypt, was captured there and taken to the Egyptian court; then was sold into slavery and given to a Greek-named prince of Cyprus. In another version of the story, in Egypt he went into partnership with a "redskin" merchant, and was wrecked, like St. Paul "out in mid-sea, topside of Crete," that is on the far side of the island; and so drifted round to Ithaca, with the same current that made St. Paul's shipmen deem that they were "driven up and down in Adria," that is, off the entrance to the Adriatic.[73] Such a "yarn" has especial value, because it implies an original audience familiar with such adventures, true or pretended, and consequently dates this section of the *Odyssey* within a period of sea-raids. And there are numerous stories about settlements founded oversea, not only by Achaeans "coming back from the Trojan War," but also by a widespread dispersal of Trojans, as far as the west of Sicily and the rugged eastern shore of the Adriatic.[74] Some at all events of the adventures collected into Virgil's *Æneid*, go back to Greek legends of early date.[75]

Indeed the name of Sicily itself, and those of Sardinia, and of the Tuscan, Etruscan, or Tyrrhenian occupants of Etruria, are too closely linked to be accidental. So long as nothing was known in detail about the sea-raids, or about Minoan intercourse with South Italy, Sicily, and the Lipari

islands, it was excusable that allusions in the *Odyssey* to slave trade between Ithaca and Sicily, or to trade in bronze and iron between the mainland opposite Ithaca, and Temesa in South Italy, should be regarded as indications of a date later than the Greek colonization of the west in the eighth century. But Minoan intercourse with Sicily goes back to the thirteenth century at least, and probably earlier; the old settlement at Tarentum had a continuous history from the same early period to classical times; Cnossus was handling the rare mineral liparite very much earlier, and there is evidence of traffic, not necessarily direct, between Sicily and Hissarlik as early as the "second city," and between the Cyclades and Sardinia probably as early.[76]

The suggestion has been made, more than once, that the names of these western regions are ancient, and that the Shakal-sha, Shardana, and Tur-sha of the thirteenth century came thence.[77] But the western Tyrrhenians at all events originated in western Asia Minor,[78] and it is more probable that Sicily and Sardinia also had their names from bands of the same Ægean peoples as went down to Egypt and Syria with the Pulisata. For Sardinia, there is even an indication of date; for early in the history of Cumae, the earliest Greek settlement on the west coast of Italy, a body of refugees, expelled from Sardinia by Carthaginian neighbors, was incorporated, whose story was that they were the descendants of Iolaus, companion of Heracles in his famous raid into the western seas, which Greek tradition dated to the generation of 1230, contemporary with the voyages of the Argo, one of which was an exploration of the Adriatic.[79]

The Fate of the Sea-raiders in Palestine and Cyprus

Following precedent, Rameses III interned the survivors of the Pulisata and their allies, with their families and belongings, where he found them, in the coast plain of "Palestine," which has its name from them still.[80]

Of these "Philistines" it is only necessary to recall, first, their wars with the Hebrew invaders of the hill-country of Judah;—highlanders and lowlanders quarreling, as pastoral and agricultural neighbors inevitably do; secondly, Hebrew folk-memory of their gigantic chiefs, with helmet, breast-plate, large shield, iron-pointed spear, and slashing sword, such as were used by the foes of Rameses III; and thirdly, allusions, in later Jewish writers, to their "ancient grudge" and to their oversea interests and alliances with Cyprus and the peoples of western Asia Minor. For it was on the Philistine coast at Dor, that sea-raiding Zakkar folk, a century later, ill-treated an Egyptian officer Uen-amon, whose narrative is preserved;[81] and the king of Byblus in the same narrative is named Zakar-baal.

There was another Libyan raid on Egypt in 1187, but in this connection we hear no more of the Sea-raiders. They had indeed attained their object, a permanent settlement in the fertile coast plain of Philistia, and this they owed to the king of Egypt, whose spectacular victory did not blind him to the facts. But the later annals of his reign are concerned with domestic troubles, and it is mainly by inference from archaeological evidence, now fairly copious, that the extent and permanent results of the great sea-raids can be recovered; and in particular their significance for our present enquiry into the spread and distribution of Greek-speaking peoples.

Obviously it is to Cyprus that we must turn, in the first place, because here a Greek dialect closely akin to Arcadian was spoken in classical times, and written, as we have already seen (p. 95), in a syllabic script adapted from the Minoan. We have also to take account of the closely related dialect of the Greek settlements in Pamphylia; and of the fact that the Dorian dialects, spoken in Rhodes, Crete, and the southern and eastern islands generally, as well as throughout south-eastern Peloponnese, separated Cypriote and Pamphylian

from Arcadian speech, and are therefore to be regarded as more recently established; a conclusion in full accord with the folk-memory of the Dorian cities.

To discover when this Arcadian dialect was introduced into Cyprus, we must review briefly the archaeological history of the island.

Minoan colonization of Cyprus began about 1500 B.C. with settlements of which the most significant were at Salamis, Citium, and Curium. It flourished, to judge from the abundance of tombs, and the dates of Egyptian objects in them, from Amenhotep III to Rameses II or a little later.[82] It was sufficiently coherent, and also sufficiently remote from its sources, to undergo gradual specialization, such as occurred also in Rhodes at Ialysus, and even in Crete and the neighboring islands, after the fall of Cnossus. It was in continuous and intimate contact with several distinct centers of culture on the Syrian coast, not yet precisely located, one of which betrays affinity with an old-established pottery tradition of Asia Minor in its liking for red bands bordered with black. There was also much intercourse with the coast plain of Palestine, the culture of which during the long Egyptian protectorate was fairly high and is better known than that of the regions farther north.

But very shortly after the reign of Rameses II, this Minoan civilization of Cyprus came to an abrupt and violent end. Not only do tombs cease at the same phase of development, on all its principal sites, but they are replaced by fresh series of tombs on distinct though neighboring sites, which had not been occupied before: Curium by Paphos, farther west; Enkomi, up the river mouth, by Salamis on the sea front. At Citium too the old site on the land-locked lagoon was superseded by one on the sea front, where later was the Phoenician harbor. Other new sites are at Amathus, east of Curium, and at Soli and Lapethus on the north coast.[83] The pottery of these new tombs is different in style

and technique from the Minoan, though it inherits forms and ornaments from it: safety pins were worn, and iron weapons were used.[84] At the same time all the foreign fabrics of pottery, characteristic of the Minoan tombs, disappear; only there remains the fondness for red bands bordered with black. But a peculiar black fabric with grooved or fluted body, which was formerly always hand-made and of black clay, is now imitated in white clay, wheel-made, and painted to look like the original vases, which (it should be noted) are of the only foreign fashion which has not been found hitherto on the Syrian coast.[85] We shall see later some reason to believe that this fashion originated in a quite different quarter.

Cyprus, that is, passed abruptly out of its Minoan phase, which had kept it in close intercourse with the highly civilized countries of the Keftiu and other vassals of the Eighteenth Dynasty, and at the same time had established Minoan arts and crafts there, and in particular a Minoan script. It passed at the same time into a new phase of culture, more closely linked with the contemporary west and north, while its intercourse with Egypt lapsed. And this crisis occurred not only between the reigns of Rameses II and Rameses III,—the significance of which we have seen,—but between that eastward raid of Attarissyas of Ahhiyava about 1230 and the traditional date (1176) for the foundation of "Achaean colonies" in Cyprus itself. When we remember that in the Trojan War, the breastplate of Agamemnon, son of Atreus, was the gift of his friend Cinyras from Cyprus;[86] that Cyprus was among the eastern countries visited by Menelaus; and that it was to Dmetor, son of Iasus, a prince with Greek names, who "ruled Cyprus in might," that the king of Egypt is represented as handing over Odysseus, captured in a sea-raid,[87]—the conclusion is sure, that it was within this period of about two generations that "Achaean" speech—that is to say, some sort of Greek—became estab-

lished there; and further that the speech of these "Achaean" settlers was the Arcadian dialect; for that is the only kind of Greek which can be traced there at all, until the fifth century.[88]

This disappearance of the old foreign connections of Cyprus would be notable enough in itself; it is all the more so, because a fresh series of foreign forms and ornaments come into fashion both in Cyprus itself and widely in Phoenicia and North Syria as well, as far inland as Carchemish on the Euphrates; and at Carchemish it begins immediately after a great destruction and reoccupation of this important bridgehead on the great river. To these fresh fashions, common to Cyprus and the mainlands north and east of it, we shall have to return later. What immediately concerns us now is the relation between Cyprus and Philistia.

For just at the moment of this sudden and profound breach in the continuity of Cypriote culture, there occurs a converse change in that of the coast plain of Palestine.[89] There had already been, for a while, some importation of Minoan pottery of Cypriote and similar styles. What now becomes common is a fresh but restricted set of forms, and a few well defined ornaments, which, though they are quite rare in Cyprus and seem to belong there to the very latest Minoan tombs, are fairly common on sites in the Ægean, from Rhodes and Crete to Mycenae, Thessaly, and Macedonia; they are also very uniform in design and execution. Most characteristic is a dissection of the vase surface by groups of vertical lines, into panels, and the use of a peculiar spiral design to decorate these divisions. There are also schemes of concentric semicircles, roughly drawn, and sketches of birds, derived from a common Late-Minoan design, but barbarously mishandled.[90] It is the old story of a limited selection made by unskilled imitators from an opulent style, and tediously repeated. We can confidently

identify this style with the newly settled Philistine occupants of South Palestine, and consequently date it not later than the generation of 1200 B.C. At this point, the traditional date 1176 for an "Achaean" colonization of Cyprus exactly supplies the explanation, and links these Palestinian settlements with the adventures of Menelaus and the yarns of Odysseus in the years following the fall of Troy in 1184.[91] Clearly an important element in these new settlements drew such culture as it had from Ægean sources.

This Philistine culture in South Palestine did not last long, and gave place to a local school of the unpainted pottery which had never ceased to be customary on sites in the highland interior. This is the material counterpart of the conquest of Philistia by the Israelites under David, shortly after 1000 B.C. Archaeologically, however, as in Hebrew history, the link with the Philistines' own kinsfolk oversea was never quite broken. David's body-guard included "Cherethites" from Crete as well as "Pelethites" from Philistia; and on the coast-land sites there is a series of occasional imports of foreign pottery in various Early Greek styles. These penetrated also occasionally inland, to Samaria, Taanach, Megiddo; but neither more nor less rarely than into Cyprus over the way.

The Fate of the Land-raiders

Before returning to trace the course of events in the Ægean, we have to note the sequel to the great Land-raid of 1190. Not all the Land-raiders fell into the hands of Rameses III, or were interned with their Philistine friends. The spear point was broken off, but its edges were still sharp.

The meaning of the destruction and reoccupation of Carchemish, already mentioned, and also its approximate date, is shown by the Assyrian record of a campaign westward toward the Euphrates, to stop an invading people, the Muski, whose name frequently recurs in Assyrian docu-

ments thenceforward, to denote the dominant people of Asia Minor; it occurs also as the Greek name for a people of eastern Asia Minor, the Moschi, and in the biblical form Meshech along with the iron-working Tubal-folk, whom the Greeks called Tibareni, and located near the Chalybes whose name gave the Greeks the word *chalybs* for "steel."[92] The first and farthest raid of the Muski was repelled thus about 1150 B.C.; but behind their great fortress they remained in occupation of the country west of the Euphrates, until the Assyrian capture of Carchemish in the eighth century.

The clear strategical connection of this capture of Carchemish by a fresh people before 1150 with the Palestinian land-raid of 1190, makes it necessary to assign an origin for both movements far to the northwest, and to conclude that the whole movement was on a very large scale, indeed a wholesale migration of fresh people.

It is therefore of the first importance that on monuments of the "reoccupation period" the people and the male deity of Carchemish are represented wearing beards, and long plaits of hair, and in a fresh costume; strong boots with upturned toes, as on monuments in the same style from Asia Minor, and a close-fitting short-sleeved tunic, clasped by a broad belt, and usually fringed below. With the belt is worn a sword with broad blade, and well defined hilt with large pommel, narrow grip, and crescent-shaped fore-end enclosing the heel of the blade, the significance of which will appear in Chapter VII.

Another glimpse of the devastation wrought by the Land-raiders is the statement of a late Greek writer that the great Phoenician city, Tyre, reckoned its years from an "era" about 1190.[93] Now an "era" of this kind usually signifies the date of the original foundation of a city. We know however from Egyptian documents of the fifteenth and fourteenth centuries that Tyre already existed, and there is every reason to believe that the city was even then ancient.[94]

This "era of Tyre" therefore indicates some profound reorganization of the city; and whether this occurred in the very year of Rameses' defeat of the Land-raiders or a few years earlier, it is significant that Tyre should have been making a fresh start so close to such a catastrophe.[95] It may be inferred that Tyre was so seriously damaged by the Land-raiders that it had to be reconstituted; its special interest in trade with the farther coasts of the Mediterranean, in later times, suggests that in the rejuvenated city fresh elements of population were incorporated from among the disorganized Sea-raiders, whose western experience was wide. Such partnership between Phoenicians and Sea-raiders is illustrated by Odysseus' "yarn" how he met a Phoenician and fitted out a ship for Libya; and as they were wrecked south of Crete, it is clear that their destination was well away to the west.[96]

In this connection it should be noted that in the Homeric poems the principal Phoenician city is always Sidon, not Tyre;[97] and that this (like the use of the name Thebes for the capital of Egypt, not Memphis, which superseded Thebes in the twelfth century) is further proof that the state of things which the epic describes is earlier than this change in the relative importance of Sidon and Tyre. The first record indeed of such a change is that Solomon's friend Hiram, king of Tyre, is also ruler of the Sidonians in the tenth century; here Tyre is leading, and in a dual monarchy[98] Sidon takes second place.

Farther north, a curious group of legends is all that is at present available for the maritime plain of Cilicia. Solinus, summarizing traditions otherwise lost, says that before the Assyrians came, Cilicia was one of the great powers of Asia.[99] It is in harmony with this that Rameses III enumerating regions devastated by the Land-raiders before they reached Syria, mentions Hatti and Quedi, the Egyptian name for Cilicia and expressly mentions Mannus, in a context which

warrants identification with Mallus, a very early Greek settlement in the Cilician coast-land.[100] The total absence, so far as is known, of Hatti monuments in maritime Cilicia, and the long line of frontier forts and monuments of this kind on the north side of the Taurus range, from Lycaonia to Melitene, shows that the builders of these monuments ruled as far south as Taurus but not farther, though they held extensive conquests farther east, between Taurus and the Euphrates.

This region Egyptian kings knew as Quedi, and coupled it with Alašya and Asi as homes of the rich and cultured Keftiu people, who disappear from view, however, before the end of the fourteenth century. The name Cilicia appears in the eighth century in Assyrian references to Khilikku folk. Before this time there are Kirki-sha among the Sea-raiders[101] and there is Homeric memory of "Kilikes" but it is as a people in the south of the Troad, to whom Andromache belonged: important enough therefore to furnish a wife for the chief warrior of Troy; indeed Sarpedon reproaches Hector for behaving as if he could defend Troy "with his own brothers and brothers-in-law" only, dispensing with "contingents and auxiliaries."[102] If the "Kilikes" of the Troad may be connected with the Khilikku of Cilicia, it is a crucial instance of the far drift of Land-raider peoples; especially if it is possible to date their invasion of Cilicia. The general question of the credibility of Greek folk-memory is reserved for discussion in Chapter VI, but it may be submitted in advance, that the coherence of separate traditions of this kind with each other is noteworthy, and their consistency with Egyptian documentary record remarkable, especially in regard to their chronology.

Now, of the fate of the Cilician coast-land during the Sea-raids and Land-raids, Greek folk-memory knew a good deal. Three distinct adventures are commemorated, led by Amphilochus of Argos, Chalcas of Mycenae, and Mopsus

of Thebes, all "seers" of exceptional knowledge and foresight, in the generations of 1230–1200. Amphilochus was son of Amphiaraus, who fought in the first Theban War: he had a chapel at Oropus in Attica, and an Argos of his own in the far northwest, and his brother Alcmaeon settled at Oeniadae, at the mouth of the Achelous. Besides his western adventure, Archilochus founded cities in Pamphylia, at Mallus in Cilicia, and Poseidium on its Syrian margin. Chalcas had cults in Pamphylia, and at Selge in Pisidia; Mopsus, in Lycia and Pamphylia, and in Cilicia at Mallus, Mopsu-estia, and Mopsu-crene. The last two are in the interior, and there is a story of an encounter between Calchas and Mopsus, when the latter was "leading his forces over Mount Taurus."[103] Fragmentary as these traditions are, they reveal a twofold aggression on the rich Cilician coast-land, by the sea ways from the Ægean, and also "over Mount Taurus" through the regions devastated by the Land-raiders. That "seers" from the European side of the Ægean should have taken part in both, need not surprise us, in view of the cooperation of Achaeans and Danaans with Shardana and Zakkaru.

Other Ægean settlements in this region are Aspendus in Pisidia, and Tarsus, which were reckoned to be colonies from Argos, though not specifically Dorian, nor on the other hand are they specifically referred to Calchas. Soli in Cilicia was colonized from Lindus on the east side of Rhodes; the date of this is unknown, but Lindus had its contingent in Agamemnon's force; and if Uilusa (in the Hatti archives) be its sister city Ialysus, there was a Rhodian chief operating on this coast as early as 1300. The foundations of Amphilochus and Calchas—the latter was an old man at the time of the Trojan War—are instructive commentary on the aggressions of Attarissyas of Ahhiyava, about 1230 on Caria and Alašya; and the excursion of Mopsus over the land front of Cilicia, on the movements of the Land-raiders.[104]

Another tradition which falls now into its place is that of the wandering of Bellerophon on the "Aleian plain" in eastern Cilicia, after his expulsion from Lycia where he had fought against the Solymi of the interior; for Bellerophon belongs to the generation of 1260 and thus connects that of Alakšandu of Uilusa with that of Attarissyas of Ahhiyava.[105]

These more easterly glimpses of the activity of the Land- and Sea-raiders have been examined in detail here, partly because their close proximity to the region covered by Egyptian documentary references gives them the support of that evidence; partly because their remoteness from the source of disturbance in the northwest, and from the "Kilikes" of the *Iliad*, gives them greater significance as proof of the extent of the movement.

The "Children of Javan" in Hebrew Folk-memory

At this point a curious complication arises from the list of the "children of Javan" in the Hebrew "Table of Nations."[106] Their names are Elishah, Tarshish, Kittim, and Rodanim, with the supplementary note "by these were the isles of the nations divided, in their lands, every one after his tongue, after their families, in their nations." Like the rest of this "Table of Nations," the names are presumably in a geographical order. As Kittim certainly represents Citium in Cyprus, we have a fixed starting point. West of this, Rodanim seems to be Rhodes, and beyond it lies the island-world of the Ægean. Tarshish and Elishah must therefore be sought nearer the writer's home; Tarshish in Cilician Tarsus, and Elishah in Alašya on the Syrian coast. Though Canaan in the next section of the list ranks as a child of Ham, it may be that "Elissa," better known as Dido of Tyre, the traditional foundress of Carthage, represents an Alašyan element in the new Tyre of the period after the Sea-raids. But in what sense are Alašya and

Cilician Tarsus "children of Javan"? In its present form the "Table of Nations" represents Hebrew geographical knowledge in the seventh century, when "Iavones"—that is to say, west-Asiatic Ionians were beginning to swarm eastward along the sea ways, like the Sea-raiders four centuries earlier.[107] But there is no reason to believe that they had as yet such a hold on these districts as to justify the ascription of them to "children of Javan." Moreover Javan himself ranks as a "child of Japheth," with Gomer, Magog, and Madai on the one hand, Tubal, Meshech, and Tiras on the other. The former group certainly represent the newly intruded Cimmerians and Manda-nomads from the northern grassland, who were harrying Asia Minor and the northern dependencies of Assyria; the latter, the Tibareni, Moschi, and other descendants of the Land-raiders. If Javan is to be associated with either of these groups, it can only be with the latter; but an alternative is to regard Javan as representing those peoples of the southern seaboard of Asia Minor who were of western origin but had come coast-wise, not by land; that is to say, as the descendants of the Sea-raiders. Yet in view of Greek beliefs that the Tyrrhenians were "brothers of the Lydians" and had issued from western Asia Minor, there is some reason for regarding Tiras, who is brigaded here with Tubal and Meshech, as indicating that some Tyrrhenians came, like the Cilicians and the followers of Mopsus, overland with the Land-raiders; and in that case, Javan also may have had representatives among the Land-raiders, as well as in the coast settlements. That the Hebrew geographer thought that the "children of Javan" had spread westward from the neighborhood of Elishah and Tarshish, is possible, but not a necessary conclusion from the order of names in the list; what is far more significant is the assignment of "Ionian" (that is, western) parentage to the whole group, Land-raiders and Sea-raiders alike.

Sea-raiders in Lycia, Caria, and Rhodes

Farther west, in Lycia, there is the same convergence of oriental testimony and Greek folk-memory. The Hatti archives have references to a district of "Lugga," and to places therein, named Vura and Talaova, representing the Myra and Tlos of classical times. From somewhere beyond Cilicia came seafaring "Lykki" to the Syrian coast and to Egypt, as early as Amenhotep II. And Herodotus' account of the Lycians is that they came to the mainland from Crete in days when "all Crete was held by folk who spoke no Greek," and occupied under the name Termilai the Milyan district which then belonged to the Solymi against whom Bellerophon and Isander fought.[108] As "their customs are partly Cretan, partly Carian," this links up both the Carian "beehive" tombs (p. 383) with South Ægean aggressions such as that of Attarissyas in Bellerophon's generation, and also the famous "Carian armor," with "crested helmets" and "shields with handles" instead of "leather slings" worn "round the neck" and over the left shoulder as heretofore; a sufficient description of the round parrying-shield which was superseding the Minoan body-shield in Homeric times and was, as we shall see (p. 377), the customary shield of the Sea-raiders.[109] The feather headdress, common among the Sea-raiders, was worn by Lycian fighting men in the army of Xerxes. The Caunians, in the rich coast-plain between Lycia and southern Caria, had (according to Herodotus) a language assimilated to Carian, or conversely. They said that they came from Crete, though Herodotus thought them indigenous. They had public drinking-bouts, and a mixed religion, one ritual of which was a war dance for "driving out the foreign gods" toward the territory of Calynda. Clearly there had been at some time a "closing of the ranks" among the immigrant part of a mixed population.

At this point we have to take note of the late and in some respects sophisticated story of the Rhodian "Children of the Sun," which appears to have escaped the notice of some who are curious in these matters. In the Homeric *Catalogue*, the three cities of Rhodes were ruled by Tlepolemus, a son of Heracles, exiled for a murder not long before the War. His people were the folk of Althaemenes, brother of Atreus' Cretan wife Aerope, who had settled there with a large body of Cretans.[110] Not long before, "war-comrades of Minos," the grandfather of Althaemenes, had occupied a halfway-house in Carpathus, in the same generation as Sarpedon's settlement in Lycia and those of Rhadamanthys in Chios and other parts of the west coast. But Rhodes itself was already in civilized hands, for there had been here indigenous "Children of the Sun," who practiced navigation, star-gazing, weather lore, and other kinds of learning, and used writing; though their documents were "washed away by the rain," a fate to which sun-dried clay tablets (like the Minoan) are peculiarly liable.[111] They had settlements on the Carian coast, in Cos, and Lesbos. They were also credited with a settlement in Egyptian Heliopolis—probably a myth to explain the eventual Greek name of that city—and their inventions and great prosperity were set back "before the coming of Danaus (1430) and of Cadmus" (1400); though these dates, like the claim to have taught astronomy and writing to the Egyptians, have been credited to local patriotism, and discounted. To the "Children of the Sun," however, was ascribed a city, Achaia, in the neighborhood of Ialysus, and this may well be early, since the "Achaean" name was being used by Hatti scribes to describe a hostile sea-power as early as 1330. There was also a "harbor of the Achaeans" in Cyprus, and one Greek family there long afterwards described itself specifically as "Achaean"; similar vestiges of these far-ranging adventurers. There can be little doubt that these "Children of the Sun" represent the

Minoan founders of Ialysus and other Bronze-Age settlements in Rhodes; and that Greek folk-memory clearly distinguished this exploitation of the western fringe of Asia Minor—for the "sun men" ranged as far as Lesbos—from the subsequent adventures of the "divine-born" Rhadamanthys and Sarpedon, and their "divine-born" contemporary Macareus of Lesbos, who in fact was "Ionian" in that his home was on the north coast of Peloponnese.[112]

There were similar stories, of an occupation of the Cnidian promontory of the mainland near by, from Argos, as early as 1530; of the foundation of Iasos in Caria about the same time; of help rendered by a "Child of the Sun" when the "children of Deucalion" were establishing themselves in Thessaly, and of an Æolid element in the Triopian promontory. Very early intercourse along this important group of halting-places on the immemorial route from the South Ægean to Egypt cannot therefore be excluded, in view of actual Egyptian imports, in Rhodes itself as early as Amenhotep II (1447–1420) and at Mycenae under Amenhotep III (1411–1375); in the generations, that is, of Danaus and Cadmus respectively.

We have now worked back from the farthest point reached by the Sea-raiders, to their nearer fields of enterprise, and thence into their Ægean homes, where we find them securely identified with two aspects of the same group of peoples, the "Sea-power of Minos" in Greek folk-memory, and the Ahhiyava of Attarissyas in the Hatti archives. How closely these aspects are related we realize partly from their respective dates, partly from Greek folk-memory about Atreus, founder of a new dynasty at Mycenae, son-in-law of Minos, and father of Agamemnon.[113] Minos, a generation earlier, and in a more advanced position strategically, does the necessary preliminaries of clearing "Carians" out of Crete and the islands, establishing the Greek language where it was not commonly spoken yet (though as we have seen,

not to the complete extinction of older speech); colonizing advanced bases with the Cretans of Sarpedon and Rhadamanthys; and supplementing or refounding the older settlements of the "Children of the Sun" and those "Ayavalas" or Æolian folk who had already reached Lesbos in the days of Eteocles son of Andreus a century before.[114] Attarissyas follows up the successes of Atreus' father-in-law, harries the Carians' bases on the mainland, occupies Pamphylia (where an "Arcadian" dialect was spoken in classical times), and raids Alašya; all in the same decade as the Argonaut raids into Pontus and across to Libya, and the combined "Achaean" and Libyan attack on Egypt in 1221. One of Atreus' sons, Agamemnon, ruling over "all Argos and many islands," has a powerful friend in Cyprus, where again "Arcadian" Greek prevailed: the other, Menelaus, visits Cyprus, Phoenicia, and other districts of the "great circuit," as well as Libya and Egypt itself. He loses his wife to another Sea-raider, Alexander of Troy, who visited Sidon on the same trip, and brought away skilled weaving women for a present to his mother. The "yarns" of Odysseus, and the nurse of Eumaeus, are in the same context; and the doings of Bellerophon, Amphilochus, Calchas, and Mopsus, anticipate the convergence of Sea-raiders with Land-raiders, at the "great circuit" of the coast, as Egyptian documents call the Cilician plain.

Now if we had only the story of the Sea-raids, as these indications permit us to reconstruct it, we should indeed be able to account for the discontinuous distribution of "Arcadian" Greek, for the occurrence of "Arcadian" elements in the "Doric" of Crete and Rhodes, and in the "Æolic" of Lesbos, and for the long list of rare words which are common to the Homeric poems and the dialect of Cyprus,[115] on the single clue supplied by Herodotus, that in the time of Minos and his brethren "all Crete was held by folk who spoke no Greek," and by Diodorus that it was just before the unifica-

tion of Crete by those rulers, that the "mixed barbarians were in time assimilated in speech to the Greeks who were there."[116] But it leaves unexplained the distribution of the other groups of dialects, and it does not answer the question why Greek had so different a fortune from that of the *Našili* language in Asia Minor.

If, on the other hand, we had only the Land-raid of 1190 and its sequel in North Syria, we should not be much advanced in our enquiry why the *Našili* language faded out with the political régime which it subserved, nor why the political power of the Hatti folk collapsed so suddenly and completely about 1200 B.C.; still less would it help us, except by remote analogy, in our search for the origins of Greek. It is the concurrence of Land-raids with Sea-raids, which makes the situation at the same time so complicated and so instructive from both points of view. On the one hand it permits, and indeed compels, the conclusion that the origin of the whole disturbance lay far back to the northwest, beyond the Hatti territory and its dependencies, and beyond the "Achaea" of Eteocles and Atreus alike. While the founders of the Hatti régime itself are recognizable in the destroyers of the "second city" of Hissarlik, its destroyers were the founders of the "sixth city" there. Further, when we compare the historically demonstrable movements of the third-century Gauls, who founded Galatia in the heart of what had been Phrygia, but also penetrated into peninsular Greece as far as Delphi in the foothills of Parnassus, with those now ascribed to the first Indo-European immigrants, who occupied Hatti-land, where Phrygia afterwards was, but also seem to have been responsible for the introduction of Greek speech into peninsular Greece, we find ourselves confronted with three successive movements, surprisingly similar. For while the Phrygian-speaking peoples overran Hatti-land, and eventually made themselves at home in Armenia, and Thracian-speaking tribes following

hard after them settled in Bithynia, and sacked Magnesia-on-Maeander, Greek folk-memory preserved incidents which are the counterpart of the Gaulish raid on Delphi and the spread of Greek speech itself (more fortunate than later Celtic) from a cradle-land "under Parnassus." Not only were there still Phrygians, Tyrrhenians, and Pelasgians, scattered about in Macedon in the fifth century; traditions of Tyrrhenian, Pelasgian, Thracian occupants of Thessaly in early times; Thracian raids into Phocis, Attica, Naxos, and other parts of the island-world; Pelasgian settlements in Thessaly, Attica, and Crete; but there was also early and explicit belief that the father of Atreus himself was "Pelops the Phrygian," son of Tantalus, prince of Lydia or (as some said) of Paphlagonia; and it is certainly a remarkable coincidence that the traditional date for Pelops' arrival in western Peloponnese is in the same generation as Laomedon's establishment at Troy, and the sudden reconciliation between the Hatti kingdom and Egypt, in view of some new situation portending peril to both. It will be noted that "Pelasgians" are here included, in accordance with Greek folk-memory, in the same category with Tyrrhenians and Phrygians-in-Europe. Whatever their origin, Pelasgian bands were certainly on the move oversea during the Sea-raid period; in Homeric Crete, in Attica under Hymettus, in Lemnos, Imbros, and in the Troad. And a name of which the consonants were PLSQ in the North Ægean, may well have passed into PLSP farther south, recognizable in the names of *Pelops* and *Peloponnesus;* and again into PLST, as in the *Pulisata* of the great Sea-raid and their Ramessid plantations in *Palestine*.

Thus it is not only the geographical distribution of the Thracian and Phrygian group of languages that finds its explanation in the migration period of the thirteenth century. History, within the region which they occupied, would seem to have so closely repeated itself on three dis-

tinct occasions, that we are forced to study very carefully the question, how far stories of the arrival of alien adventurers in various parts of Greece and the Ægean during the thirteenth century signify an anomalous complication of the linguistic, as well as the political situation; and also how far this alien element is in fact the explanation, because it was the cause, of much that is anomalous in the early history of the Greek people. Thus, though this examination of the historical background of the Hatti régime in Asia Minor, and of the *Našili* language in which its administration was carried on, has carried us wide and far, it has not been so irrelevant to the argument as may appear at first sight. For our immediate purpose, the examination of the Greek dialects in their geographical distribution and surroundings, it has the advantage of giving in chronological dimensions the outlines of the linguistic history of Asia Minor, the land area immediately east of the Greek peninsula, and separated only from it, north of the Ægean Archipelago, by the Thracian region from the sea coast to the Danube, which is all that divides either Greece or Asia Minor from the Roumanian prolongation of the great grassland of the north. Either through this Thracian vestibule or through the narrower but not more difficult avenue from the Hungarian plain into Macedon, any migration of peoples, or spread of languages, from those large grassland regions must have come; and the history of the Hatti-folk reveals two such comings; that of the Hatti-folk themselves, which cannot be later than 1900 and may be earlier, and that of the Land-raiders, which reached its farthest point in 1150, but had probably begun about 1270, and certainly went on later and farther to the southeast than the great land raid of 1190 which was stopped in Philistia.

Summarizing the linguistic information derived from documentary sources, east of the Ægean and within it, we have seen that the earlier introduction of Indo-European speech into Asia Minor occurred not later than about 1900

B.C., and may have been earlier. This date accords with that of the first appearance of horse-using people with Indo-European names for kings and gods, in Babylonia, and less precisely (because the Indian evidence is less precise) with the coming of Indo-European speech into India. But the limited use made by the Hatti-folk of their *Našili* language, and the perpetuation of several languages which are not Indo-European, in Asia Minor, until the whole Hatti administration was itself upset about 1200, confirm the notion that in Greece, too, many place names, and the loan words already described, are derived from similar languages. In the Ægean the Minoan script only went out of use shortly before the date of the first Hatti references to Ahhiyava and its "Æolian" princes; in Cyprus it was introduced about 1500 B.C., and afterwards adapted rather clumsily for writing Arcadian Greek. It had probably been used to write several languages during the long period when successive varieties of this script were in vogue; and that several languages besides those of "Dorians" and "Achaeans" were in use side by side in Crete, is described in a well-known passage of the *Odyssey*. The importance of this graphic and detailed description of the starting point of a Sea-raid to the Egyptian coast can be but slightly affected by opinion as to the date of its composition. If it is accepted as approximately contemporary with the events it describes, it is valuable evidence for the distribution of Greek peoples and dialects at that period. If, on the other hand, it is later, it illustrates the persistence of Greek folk-memory about the Sea-raiders, and also demonstrates the survival of languages other than Greek in Crete to a later period than is commonly assumed; though the Praesian inscriptions, already discussed, prove the survival of one such language some centuries later still.

From the political status of the Phrygian and Thracian languages, in early Hellenic times,—Phrygian, as the speech

of the inscription on the monument of "Midas the king," and Thracian, as that of a people whose chiefs had Indo-European names, and were great horse-breeders—and also from the displacement of the old Vannic language by Armenian between the eighth and sixth centuries,—it is certain that the new régime in Asia Minor which resulted from the Land-raids, was "Indo-European" in a quite different and more domestic way than the Hatti régime had been. Only around the margins of the peninsula, and in its highlands, did languages such as Lydian, Lycian, and Lycaonian remain in use, alongside of Phrygian, much as the Praesian language lingered in Crete; but in the "List of Sea Powers" after the Trojan War (preserved by Eusebius from Diodorus, and probably referable to a fifth-century source,[117]) the Lydians, Pelasgians, Thracians, and Phrygians occupy the first, second, third, and fifth places respectively,—from 1184 to 900 according to Eusebius' chronology,—as though these peoples, three of whom in the Homeric *Catalogue* have sea fronts around the Marmara region, dominated the west coast of Asia Minor as well. The belief of Herodotus that the Tyrrhenians of Etruria were in some sense "brothers of the Lydians," is a hint that there had been a considerable early exodus from the Lydian section of that coast. It is clear, further, from the presence of the Bithynians, who were a Thracian people, in Asia Minor in early classical times, though not in the Homeric *Catalogue*, that the movement of such people across the Marmara region went on after that document was composed as well as before. The Lydians, similarly, are post-Homeric, and presumably newcomers: Herodotus thought that their predecessors, the Maeonians of Homer, had "changed their name" to that of a new ruler.

The Greek Dialects in Their Geographical Distribution

Meanwhile, what was happening in the Greek peninsula itself? Having here no such documentary evidence as in the regions east of the Ægean, we must work backwards from the geographical distribution of the dialects in classical times, which as we have already seen is anomalous and presumes much dislocation.

From the likenesses between Arcadian, Pamphylian, and Cypriote Greek, it is certain that the Pamphylian and Cypriote settlements were colonized from southern Greece at a time when Arcadian was spoken in maritime districts of Peloponnese. The Dorian dialects therefore have flooded round the south and east of Arcadia, and West-Greek dialects round the north and west, from a common center of distribution. That both reached Peloponnese from the northwest, not by way of the Isthmus, is certain; first, from the distribution of the West-Greek dialects in central Greece, which have split the Æolic-speaking peoples into a Boeotian and a Thessalian section; secondly, from the existence of the solid uncontaminated mass of Ionic-speaking people in Attica, north of the Isthmus; thirdly, from the existence of the small Dorian enclave in Megaris, showing that where Doric speech *did* displace Ionic, it came from the south, not from the north, and failed to make touch, even so, with the West-Greek-speaking people in Phocis. That the Doric and West-Greek movements originated some distance to the northwest, is also certain from the intrusion of West-Greek elements into the speech of western Thessaly, which was therefore already Æolic when this southward movement began. All these inferences from the geographical distribution are confirmed as we see in Chapter VI by Greek traditions about such movements as are here inferred. We may there-

fore confidently dissect away these latest overlaps, and reconstruct the "pre-Dorian" distribution of dialects in Greece, as sketched in figure 5.

The West-Greek Dialect and Doric

The "Dorian" group of dialects, or more accurately speaking, that "West-Greek" group of which the Dorian dialects (themselves variable) are the most widespread, and best represented by extant examples, conserved several primitive features which all other groups have lost, and must therefore be regarded as having attained that eventual wide distribution rapidly and comparatively late, and also as having been previously secluded more effectually from linguistic disturbance.

Sufficient ground for these inferences is their later geographical distribution, which is in two main divisions. The southeastern of these contains the dialects of districts, in Peloponnese or in the South Ægean beyond, which in Greek tradition became Doric through the "coming of the Dorians" at the end of the twelfth century; moreover all the Peloponnesian districts, and also most parts of Crete, still had a lower stratum of pre-Dorian population in classical times, and a more or less acute race-feud between these conquered people and their closely organized Dorian masters. In Doric dialects, and especially in those of Argolis and Laconia, *s* between vowels tends to become *h* and then disappear. Whether this and other "Doric" peculiarities were common to the Dorian upper-class and the serf population in classical times has been disputed: but this question concerns rather the amount of survival than the fact of Dorian conquest and the spread of Doric speech.[118]

The West-Greek group of dialects related to Doric includes those of Epirus, Acarnania, Ætolia, Ozolian Locris, Malis, Phthiotis, and Phocis, together with Elis south of the Corinthian Gulf. Greek tradition regarded the popula-

tion of Elis in classical times as having spread out of Ætolia during the "coming of the Dorians" and after it. Conversely, though the name of the small upland district of Doris, north of Phocis, was explained as recording an early occupation by Dorians of the same stock as those who eventually

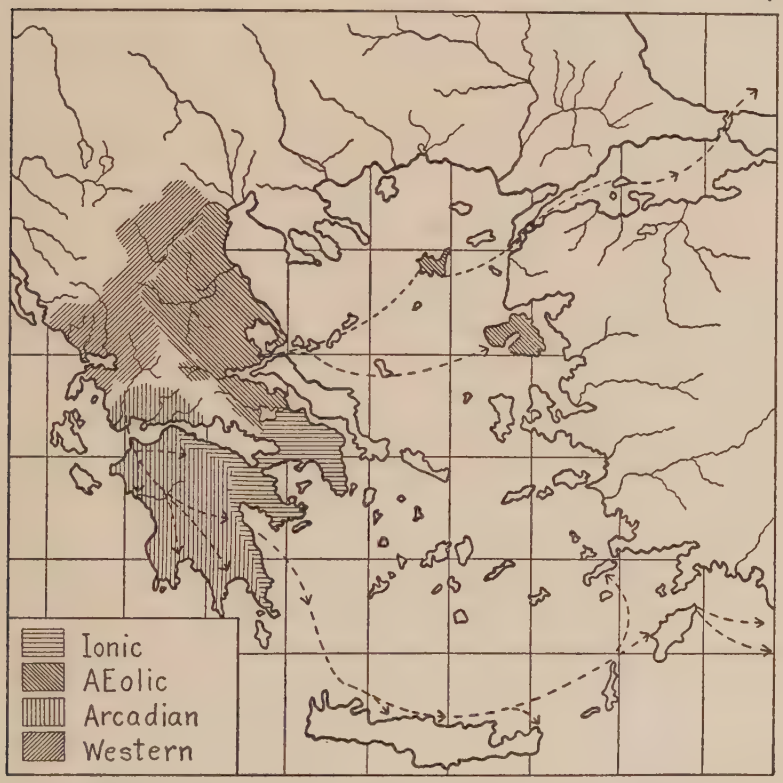


Fig. 7.—Probable Distribution of Greek Dialects in the Thirteenth and Twelfth Centuries B.C., before the Southward Expansion of West Greek, and the Differentiation of Doric

settled in Peloponnese, the dialect of this northern Doris in classical times was of the West-Greek group. As the northern Doris separates the two districts called Locris, and as the Homeric *Catalogue* omits the southern Locris, and also Doris itself, it is commonly inferred that these northern

Dorians were late intruders. Their intrusion however is not necessarily post-Homeric; for not only are these districts ignored in the *Catalogue*, but no town in either of them is included in any of the neighboring contingents. They are in fact a blank area in the Homeric map; and this is best explained by supposing them to have been simply outside that "Achaean" régime of which the *Catalogue* is a gazetteer. Another such outland region extends from the limits of Agamemnon's sway, on the north border of Thessaly, to the west border of Paeonia, along the Axius river, which is the limit of Priam's confederacy; and the statement of Herodotus that there was a time when the Dorians "lived in Pindus and were called Macedonian" would be in full accord with this silence of the *Catalogue*, if it could be shown that this region, which includes nearly all the Macedonia of Herodotus' time, was occupied by Dorian tribes at the period to which the *Catalogue* refers. Proof of this will be offered later from genealogical evidence (p. 318).

By late Greek writers, such as Strabo, the West-Greek dialects were included in the Æolic group because they were neither Ionic nor ordinary Doric;[119] but though there are West-Greek elements in the speech of western Thessaly, and though Thucydides describes an irruption of fresh people into Thessaly and Boeotia only twenty years before the "coming of the Dorians," and seems to connect these two movements,[120] the linguistic differences between Æolic and West-Greek speech are sufficient to separate them in the way now generally accepted; and the geographical position of Phocis, Locris, Malis, and Phthiotis, wedged between Æolic Thessaly and Æolic Boeotia, confirms the impression that the dialects of these districts represent an injection of northwestern people into an Æolic area formerly continuous from Thessaly southward at least as far as northern Boeotia.

It follows that the whole West-Greek group, together with the related Doric dialects to the southeast, reached

their historical positions by some more westerly route than the Thessalian plain. This is in accord with Herodotus' story that before the Dorians came south they "lived in Pindus, and were called Macedonian"; for "Pindus" was a general name for the main highland watershed of peninsular Greece, north and west of Thessaly. Now immediately north of this lies the long V-shaped valley of the Haliacmon river, whence, at its sharp angle, an easy pass leads into the headwaters of the Peneius. Here is direct lateral leakage downstream into western Thessaly, of the kind indicated by the West-Greek elements in Thessalian Æolic. From the Peneius headwaters, however, there is passage to the long southward trough of the Achelous, which runs parallel with the main watershed but west of it, and reaches the sea on the north side of the Gulf of Patras, with easy crossings thence into western Peloponnese. By way of the principal tributary which joins the Achelous from the east, there is moreover direct and fairly easy access to the headwaters of the Spercheius, and thence eastward down its wide valley, into Phthiotis south of Thessaly, and through Malis and Doris into Phocis and Locris. Geographical configuration thus confirms the traditional history, and explains the philological relationships of the dialects in classical times.

In what sense, other than geographical, the Dorians or any other people of the northwestern linguistic group deserved to be "called Macedonian" is a further question; less easy to answer, because there is no reason to believe that the Macedonians of classical times ever wrote their own language, and consequently our knowledge of it comes wholly either from Macedonian proper names, or from curious Macedonian words preserved by Greek scholars who evidently did not themselves know the living speech of Macedon. It was however agreed in the fifth century that at least the Macedonian royal family was Greek, for Alexander son of Amyntas was accepted as a competitor in the Olympic games; and, for this, Greek descent was necessary.[121]

Probably some kind of Greek speech spreading from the numerous Greek cities on the coast, which were of mixed Ionic origins, became the language of trade, of the court, and of administration fairly early, and thereby reduced the unwritten Macedonian language to a patois.[122]

At this point we may leave Doric and its West-Greek "poor relations" on one side, and ask what the distribution of other dialects was, before the "coming of the Dorians."

The Arcadian Group of Dialects

It has been commonly supposed that because the Arcadian group of dialects is most widely scattered in discontinuous areas it was the first to be so widely distributed; also that this distribution must have occurred early. For the Arcadian dialect itself, though it must once have been spoken in a maritime district, since its counterparts in Cyprus and Pamphylia are oversea, was completely surrounded in classical times by Doric and other West-Greek dialects, and restricted to the highland interior of Peloponnese. As the "coming of the Dorians" into Peloponnese is the latest of the readjustments which folk-memory has recorded, it follows that Arcadian-speaking peoples were not cut off from the coast later than the end of the twelfth century, but also that there is no need to suppose that they were cut off any earlier than this, unless some earlier cause than the "coming of the Dorians" is detected. That the "coming of the Dorians" was sole and sufficient cause is indicated by the fact that, though the Pamphylian dialect differs from the rest of this group in containing a few points of resemblance with Doric, these are the sole alien characters which have been observed in it; whence it may be inferred that no Greek-speaking people of other than Doric dialect had opportunity for close intercourse with the Pamphylian colonists, after their arrival in Pamphylia.[122a]

In regard to Cyprus, we have already reason (p. 95) to doubt whether there was any historical connection between the introduction of the Cypriote syllabary, or its Minoan prototype, and of the Arcadian dialect of Greek, which alone was established there. From resemblances between Arcadian and the Doric dialects of western Crete, Rhodes, and other southwestern islands, it is inferred that something like Arcadian was spoken there before the "coming of the Dorians"; and it is clear from the presence of a large Cretan contingent in the Homeric *Catalogue*, and from explicit mention of Achaeans speaking a dialect of their own, among the peoples of Crete,[123] that the Dorians were not the only Greek-speaking occupants of this island in Homeric times. It seems to follow further that, in Crete at all events, Homeric Achaeans spoke Arcadian Greek.

The Ionic Dialects, and Attic

The dialect of Arcadia itself differs slightly from oversea members of this group, in that it has points of resemblance with Ionic-Attic. Such resemblances may arise either by mere intercourse between habitual neighbors, or through overlap consequent on the spread of the one dialect at the expense of the other, in which event it usually happens that some elements of the speech which has been superseded are acquired by that which becomes dominant, especially in matters of idiom and pronunciation. A familiar example is the prevalence of a Highland, or Welsh, or Irish accent, and even of some grammatical peculiarities, as well as many words of Celtic derivation, in the dialects of English which lie next to the districts where Celtic-speaking peoples survive. The question then arises, whether these resemblances result from contact; or, if not, whether the Arcadian dialect has been imposed upon a people speaking an early form of Ionic, or an Ionic dialect upon a people originally Arcadian. This question cannot be answered directly, be-

cause the "coming of the Dorians" not only restricted the range of Arcadian speech south of the Isthmus-region, but also that of Ionic-Attic north of it, by the conquest and permanent occupation of Megaris, which is geographically the westernmost district of Attica. Consequently the whole region within which the zone of contact between Arcadian and Ionic-Attic lay, before the "coming of the Dorians," has been completely disfigured and transformed in respect of its speech.

Indirectly, however, this blank in our knowledge may be supplied. In the first place, though the Ionian cities of Asia Minor were founded by a very mixed flood of refugees from peninsular Greece, including people from both shores of the Saronic gulf, and even from the south coast of the Corinthian gulf west of the Isthmus, there is no such evidence of Arcadian admixture in the Ionic dialects of Asia Minor, as there is of Ionic-Attic elements in the Arcadian. Secondly, besides folk-memory of a population closely akin to that of Attica, south of the Saronic gulf, we have the statement of Herodotus[124] that the population of Cynuria, the district west of the gulf of Argos, very much farther south of the Isthmus, had been formerly Ionic, but had been "made Dorian by Argive rule and lapse of time" since the arrival of the Dorians in Argos. Thirdly, there is Attic tradition interwoven with one of the supreme crises of early Athenian history, that it was out of north Peloponnese, and by way of the Isthmus, that "Ion and his men" entered Attica in military array, at the invitation of the Athenians "when need overtook them," "settling with them," thereupon, and leaving their mark on the political structure of the region in that fourfold classification into "Ionic tribes" with "tribal kings" which remained the basis of Attic military organization and political privilege until the last years of the sixth century.[125] This Ionian movement into Attica has nothing to do with the tumultuary drift of broken

people through this region under stress of the "coming of the Dorians"; for it occurred before the days of Theseus, the great reorganizer and federator of the whole Attic promontory, and consequently at latest in the third generation before the Trojan War, that is to say, on Greek reckoning, about 1300 B.C. We shall have occasion to refer again to this incident, when we come, in Chapter VI, to the general question, what historical value is to be assigned to Greek folk-memory.

Throughout this discussion, the name Ionian has been applied, in accordance with Greek usage, to describe people who spoke Ionic dialects, or may be reasonably supposed to have done so. Ionic speech was so called because its most important dialects in classical times were those of the Greek cities of Ionia. But by Ionia was meant the coast district of Asia Minor, north of the Maeander and south of the Hermus. Miletus, for example, a first-class Ionian city, was not geographically in Ionia, but on a promontory of northern Caria. This regional use of the name explains Herodotus' description of "Ionian and Carian" adventures in the Levant, whereas if members of Greek cities had been intended, we should have expected "Ionian and Dorian." In view of the "Yevanna" among allies of the Hatti in the thirteenth century,[126] and of the Hebrew use of "Javan" to describe people of Cyprus and Rhodes, and of coast districts of North Syria and southern Asia Minor, it has been suggested[127] that the original "Iavones" were pre-Hellenic inhabitants of the regional Ionia; and the form of the name has analogies in the Maeones of the Hermus valley, in the Trojan *Catalogue*, and in the historical Lycaones of the interior. Similar tribe names occur, however, elsewhere; Paeones and Macedones; Cha(v)ones, A(v)ones, and Ophiones in Epirus; besides Acarnanes and numerous other "-anes" names in northwestern Greece. As, however, the Asiatic coast region was already beginning to be occupied in the generation of

1260, and at all events one leader in this oversea movement came from the Peloponnesian "Ionia,"[128] the alternative is not excluded, that even the Yevanna allies of the Hatti, in the same generation, may have been precursors of the "Ionian and Carian" seafarers of later days; more especially as the "coming of Ion and his sons" from northeastern Peloponnese into Attica was in the generation of 1300, and the Peloponnesian settlers in Lesbos were themselves anticipated there by "Æolian" Ahhiyava about 1330.

That there was unstable equilibrium in the island-world is clear, first from Greek memory of "Carian" occupancy both before and after the "sea power of Minos" in the thirteenth century, to which the coastwise settlements of Sarpedon and Rhadamanthys belongs (p. 141); secondly, from the almost complete silence of the epic about the island-world east of Euboea and north of Agamemnon's vassals around Rhodes and Cos; thirdly, there was also considerable intermixture of "Carians," and even of Lycian descendants of Bellerophon,[129] in the eventual "Ionian" city-states, as far north as Ephesus and Colophon; and fourthly, the Rhodian stories of coastwise colonization, as far as Lesbos, and as early as the generation of 1300, show how persistent had been the attempts of the southern Ægean folk to exploit what Herodotus justly regarded as "God's own country."[130] If the interpretation now to be suggested (p. 159) for the peculiarities of "Ionic" speech be well founded, here is a region in which intercourse between Greek-speaking and "Carian" (that is to say, southwest-Asiatic-speaking) folk was most intimate, and lasted longest.

These convergent indications that, before the "coming of the Dorians," the northwestern districts of Peloponnese had once been Ionian, must be qualified, however, by two considerations; first, that the exodus of "Ion and his men" occurred nearly two hundred years before the Dorian conquest;[131] second, that the régime which the Dorians displaced

in Peloponnese is described not as Ionian but as "Achaean," and was attributed to a group of powerful adventurer families, the most important of which, the "House of Atreus son of Pelops" was establishing itself in Laconia, Argolis, and on the north coast of Peloponnese, in the generation immediately before Theseus.[132] It would seem that there is, in this group of legends, at the same time the political explanation of that exodus, and a hint, which needs careful examination, that the "Achaean" domination in Peloponnese was the political counterpart of the Arcadian-speaking period in the linguistic history of the region; and we have seen already (p. 141) how place names and folk-memory connected the Greek colonization of Cyprus, Rhodes, and the south and west of Asia Minor with the great days of Achaean domination at Argos and Sparta. This does not involve complete identification of Achaean peoples with Arcadian-speaking Greeks; it serves however to explain how it happened that districts which had been formerly "Ionian," and had parted with some of their "Ionian" population in the thirteenth century, were Achaean-ruled and Arcadian-speaking when the Dorians came at the end of the twelfth; and also how it happened that the sea and islands offshore the gulf of Corinth were called Iŏnian (though not indeed Iōnian) in classical times.

There is a further reason for discussing at some length the relations between the Arcadian and the Ionic-Attic dialects, namely the closely analogous relationship between Ionic-Attic and its northern neighbor, the Boeotian variety of Æolic. The Boeotian dialect, like the Arcadian, differs from the other dialects of its own group in certain points of resemblance to Ionic-Attic. In this instance however, the zone of linguistic contact is known. South of the abrupt mountain frontier between Boeotia and Attica there is no trace either of Boeotian or of other Æolic speech, nor any tradition of successful invasion of Attica from the north,

though there are legends of occasional wars and raids, and of old families from Boeotia who took refuge in time of trouble, across the Attic frontier. On the other hand, there were traditions of a considerable extension of "Ionian" population north of this line, as the philological evidence leads us to expect.[133] In the Homeric *Catalogue* the cities of Euboea, which in historic times were reckoned Ionian, and spoke Ionic dialects rather more closely related than those of Asiatic Ionia to that of Attica, are assigned not to Ionians but to the Abantes, remnants of whom were recognized by Herodotus among the mixed population of Asiatic Ionia, though they had otherwise disappeared as a people.[134] There was however an Ionian contingent in the Trojan War, and as it was brigaded with those of Boeotia, Locris, Phthia, and the Epeians, it is probable that it was drawn from the same neighborhood.[135] Now Thucydides records an invasion of Thessaly and Boeotia by fresh people from the northwest, sixty years after the Trojan War, and twenty years before the Dorian conquest of Peloponnese; and though there is no reason to suppose that this was the first occasion on which Æolic-speaking peoples occupied parts of Central Greece, such an intrusion certainly helps to explain the abruptness of the linguistic frontier between Attica and Boeotia, the presence of Ionic-Attic elements in Boeotian Æolic, the disappearance of Ionian people from the mainland of Central Greece, and the appearance of Ionians, in place of Abantes, as the inhabitants of the coastal island of Euboea, a natural stronghold for refugees from Boeotia.

There is the further consideration, that the dialect of the Homeric poems, conventional and in part artificial as it admittedly is, presents a remarkable mixture of Æolic with an early stage of Ionic, and also that the poems themselves contain legends, and presuppose local knowledge, of places and events within regions which were occupied by Æolic-speaking peoples in historic times, but were dominated (in

the "Heroic Age" to which the poems refer) by recently established dynasties—such as that founded by Peleus, father of Achilles, who came to Phthia from Ægina,—of the same type as we have traced encroaching on the Ionian area from the southwest.[136] However, there is no proof that these "divine-born" dynasties had anything to do with the first introduction of Æolic speech into any part of north-eastern Greece; any more than with that of Arcadian speech into Peloponnese. In both regions alike they are at most a secondary cause of disturbance, and in both, the effect of their doings was to accentuate the abruptness of the linguistic transition, from Arcadian and Æolic respectively, to the Ionic-Attic dialects which lie between them, in a way which is shown by the survivals of Ionic elements, both in Arcadian and in Boeotian Æolic, to be due to the encroachment of these dialects on the margins of the region previously occupied by Ionic-speaking folk. The Homeric mixture of Æolic and old-Ionic needs some better explanation than the arrival of a few forceful strangers, some of whom may have learned to speak Arcadian, but who were so far "divine born" that their names at all events do not seem to be Greek at all. To this problem of Homeric dialect we must return later (pp. 365, 417) with other equipment.

That the common ancestor of Ionic and Attic was earlier established in Central Greece than either Arcadian or Æolic is in accord with the greater differentiation of its vowels from their primitive sounds, even before the separation of the dialects of Insular and Asiatic Ionia, in which further differentiation was thereafter slight, from Attic, in which it continued in some respects to increase after they migrated oversea. Such differentiation presumes either a longer period of separate development, or exposure to more intense linguistic perversion, that is to say, more direct and intimate contact with a population which did not speak Greek at all.

Moreover, if there is any reason for believing that the period was not long, it is the more necessary to suppose that the disturbance was intense, and conversely. Now it is one of the paradoxes of Greek ethnography that the Athenian people, who were eventually recognized as being so thoroughly typical of all that was Greek, were generally admitted to have been originally "Pelasgian," in the sense of "pre-Hellenic," and to have become Greek subsequently and also gradually. Herodotus, for example, gives three distinct stages before the arrival of "Ion and his people" consummated the conversion of the people of Attica into Greeks,[137] and none of them are long: for Cecrops, who achieved the first of them, belongs only to the generation of 1560, less than three hundred years before the coming of Ion. This "Pelasgian" quality is something far more deep-seated than is attributable to those Lemnian "Pelasgians" who came and went "beyond the Ilissus" as "fellow-lodgers with the Athenians."[138] It presents the Hellenization of Attica as an ancient, and yet far from primeval event, and raises the question, how far the deeply stratified folk-memory of the Athenian people results from a real continuity of culture with the pre-Hellenic world, of which the differentiation of the Attic dialect is a symptom. To this question it will be necessary to return more than once (pp. 289, 333, 361, 365).

The Æolic Dialects

Further light is thrown on the situation in Central Greece from a quite different quarter. While the Boeotian dialect of Æolic has peculiarities in common with Ionic-Attic, the Lesbian dialect of the same group agrees in certain other respects with Arcadian and Cypriote. In view of the resemblances between dialects which have been already discussed, and the conclusions which it seems proper to draw from them in the light of Greek folk-memories, it need only be noted at this stage that the same disturbing factor,

namely the "divine-born" dynasties, which has been already detected in connection with the colonization of Cyprus, Lycia, and Rhodes, and the dislocation of the dialect-grouping both south and north of Attica, was also held responsible, in Greek legend, not only for the siege of Troy, but for a whole series of conquests and settlements in that section of the Asia Minor coast which was known in historic times as Æolis: Lesbos in particular was believed to have been conquered by Agamemnon in the course of the Trojan War.[139] Nor does this imply that Lesbos was then first occupied by Æolic-speaking or any kind of Greek-speaking people; indeed the folk-memory of Lesbos is among the longest in all Greece. But it illustrates a political situation in which it was likely—perhaps inevitable—that the Æolic dialect, which was eventually spoken there, should include Arcadian, that is to say pre-Dorian Peloponnesian elements. It must further be remembered that the Ahhiyava chief who attacked La-as-pa in the fourteenth century was in some sense "Æolic"; and that one of the two districts which kept the topographical name Achaea in historical times, was Achaea Phthiotis west of the Pagasaean gulf, in the heart of the Æolic-speaking area. That its dialect in classical times was West-Greek proves nothing as to its speech in the fourteenth century, in view of the geographical distribution of West-Greek dialects, which has been already discussed (p. 149).

It is at first sight a small point, that the shift of vowel sounds in the "Arcadian" group of dialects (by approximation of *e* to *i* and of *o* to *u*, leaving the primitive *a* unchanged) had already occurred before the spread of this kind of Greek to Cyprus and Pamphylia, and further that this change is the converse of the differentiation in Ionic-Attic where *e* is maintained at the expense of *a*, and in Æolic, where *o* is maintained also at the expense of *a*, as when *stratos* becomes *strotos*. But this is a kind of divergence most likely to occur

if Arcadian-speaking folk intruded into regions which were Ionic-speaking in the south and Æolic-speaking in the north; upper and lower ranks cherishing and emphasizing their respective peculiarities of utterance. A parallel instance is the modern intensification of the aggressive "cockney accent" of the southeast of England in face of the dialects of the Midlands and the North Country. Similar complementary changes are recognizable between the "*a* to *e*" modification in Ionic-Attic, and the "*a* to *o*" in Æolic; and it is significant that the change from *a* to *e* went much farther in Attic, in face of Æolic aggression as far as the abrupt Cithaeron-Parnes frontier, than in Asiatic Ionia, where there was no such Æolic aggression;—where indeed such aggression as there was, in early historic times, extended the range of Ionic speech slightly, at the expense of its Æolic-speaking neighbors to the northward.[140]

Probable Sequence of Greek Dialects

It seems then reasonable to suppose that Ionic-Attic represents the earliest group of Greek dialects to be intruded into an Ægean world which then spoke something quite different from any kind of Greek; and that Æolic dialects established themselves in the spacious northeasterly regions, of which Thessaly and Boeotia are the most important, but occupied them only gradually, until at a quite late date,—according to Greek tradition, late in the twelfth century,—this process was accelerated under pressure from the northwest, just before the "coming of the Dorians" into the south; with the result that the Boeotian dialect replaced Ionic as far south as the frontier of Attica, driving Ionic-speaking refugees into Eubœa and through the Cycladic islands toward Asiatic Ionia. As there are no relics of Arcadian speech in these northeastern regions of peninsular Greece, it seems necessary to suppose that Arcadian, which exhibits less modification than Ionic, and of a quite different

and contradictory kind, found its way into Peloponnese by the only alternative route, namely through the western highlands, much in the same way as the Doric and other West-Greek dialects later. Thus Arcadian was intruded, like Doric, from the west, into districts of northeastern Peloponnese which were already speaking Ionic; and Arcadian was still engaged in superseding Ionic here, and also in propagating itself oversea (as is shown by the dialects of western Crete, Rhodes, Pamphylia, and Cyprus) when it was superseded and restricted in its turn by the "coming of the Dorians" from the same northwestern highland. Dorian-speaking settlers oversea thus found Arcadian speech in western Crete, and superseded it with the exception of a few traces; they established dialects of their own throughout the southwestern Ægean, and in Asiatic "Doris"; but in Pamphylia Arcadian speech survived with only slight changes, presumably due to these Dorian neighbors; and in Cyprus maintained itself uncontaminated.[141]

From linguistic evidence alone, it is seldom possible to date precisely even an abrupt linguistic change, still less the gradual spread of one dialect at the expense of another. Even when documents of various ages are available, their respective dates have to be determined on archaeological grounds in the first instance; and when the philological argument rests on survivals or the results of processes of which only the nature can be determined, not the rapidity, it is inevitable that the appeal should be to other kinds of evidence, when chronological results are desired. The evidence of the Greek dialects must therefore be left for the moment in this rather indecisive state; but it is submitted that the relative perspective of the linguistic processes and events outlined here is sufficiently well established to deserve more exact determination later.

Now it is one of the paradoxes of early Greek ethnology, that the Dorian-speaking peoples, who came south last, and

from farther north even than the Æolic peoples, are confidently described as being in the fullest sense "children of Hellen," with a circumstantial story[142] of events which drove them first north, from the traditional cradle of the Hellenes (which was not on the Eurasian steppe, nor even in Macedon, but in Central Greece, between the north foothills of Parnassus, and the southern border of the Thessalian plain) and only afterwards through the northwestern highlands into the south. At first sight this story looks like a myth devised to incorporate among the "children of Hellen," of Central Greek origin, a dominant but alien people from the highlands of Pindus farther north. But though this may account for the Dorians, it does not explain why the other "sons of Hellen" were supposed not only to have spread from the same Central Greek cradle-land as the Dorians, but to have originated there. For Hellen is the son of Deucalion and Pyrrha, and sprang into being as they came down from Parnassus, on the morrow of the great flood. To accept this myth would be to postulate a special creation for one of the most most notable of Indo-European languages. But how did the story arise; and in particular how did "Pyrrha" come by her red hair? Moreover, how did the "gods of the Hellenes," like the Hellenic peoples who worshiped them, come to be regarded as the offspring of a supreme sky-god, who is at the same time the occupant of Olympus, a conspicuous snowcapped mountain on the northeast margin of Thessaly? To make headway in our argument, we must face next the question,—What common conception, if any, did the Greek peoples form of their gods?

NOTE ON INTERPRETATION AND VALUE OF LISTS OF FOREIGN NAMES (Pp. 115–124)

In estimating the value of names of foreign peoples transliterated by Egyptian or Hatti scribes, it is necessary to remember that this evidence is cumulative. Each identification, if it occurred alone, would be negligible, for it might be due to accidental similarity; taken together, in sufficient numbers, they are conclusive. An example nearer home will illustrate this. "Herring" is the name both of a fish and of an old Saxon clan. There is an English village in Suffolk called Herringswell, and a French village close to Boulogne called Harenguezelle: to identify these place names without other evidence, however, would be risky. But within ten miles of Boulogne there are no less than seventeen village names with equally obvious English equivalents certainly derived from Saxon family names, such as Audinghen (Oddingham), Echinghen (Etchingham), Manihen (Manningham); five, of the form Alincthun (Alington); four like Bonningues (Bonnings) and Wirwignes (Wirrings); as well as Brequercque (Braekirk or Braychurch), Wicardenne (Wickerden), and descriptive words such as Wissant (Whitesand), Dieppe (Deep), Pittefaux (Pitfalls), and Le Wasst (the Waste). These make it certain that the French side of the Channel was as completely occupied once by Saxon settlers as the Kentish coast, and this justifies in turn less obvious identifications such as Questrecques (Westwreck) and Hesdingneul (Heading-knoll). Similarly, when four or five names of tribes or districts of Asia Minor are associated in the same Egyptian list of Hatti auxiliaries, neither the addition of grammatical suffixes, nor the peculiarities of Egyptian spelling, need prevent us from recognizing them.

CHAPTER IV

COMMON BELIEFS: EVIDENCE FROM COMPARATIVE RELIGION

The religious beliefs of a people are a peculiarly delicate test of uniformity, or its opposite, in mental outlook and principles of behavior; and religious practices conserve expressions, no less significant because antiquated, of beliefs formerly held in regard to the two ever-present problems, how things happen in the world around us, and what our own place is in that world, more especially in respect of the three supreme crises of birth, parentage, and death. Now the only events in nature, in regard to which we seem to have a glimpse into "what really happens," are our own actions, and actions of other beings like enough to ourselves to justify us in imputing to them minds and wills like our own. And the only event, outside the course of nature, of which most people are sure that they know something, is the fate of those minds and wills, which have made other beings behave as we ourselves do, after every manifestation of them, that was in the course of nature, has ceased to be.

Olympian Deities in Their Mature Form

In regard both to the Powers of Nature, and to what we may describe as the Powers of the Disembodied, the religious beliefs of the Greeks present some superficial uniformities, but also surprising anomalies when they are examined more closely. When Pericles commissioned Pheidias to express in visible permanent shape "the gods whom the city observes," the sculptured frieze of the Parthenon showed a gathering of human figures slightly larger, but hardly more beautiful,

than their human worshipers, and similarly clothed, of a grave dignity rather than majesty; expressing courteous participation in ritual acts, and gracious acceptance of what is offered them. This Olympian pose was not achieved in a day, nor without effort, any more than the Greek view of life, as Pericles saw it in fifth-century Athens. Portrayed in retrospect in the pediments of the same Parthenon, Athena and Poseidon and Zeus himself are strenuous participants in a world-in-the-making; Apollo at Olympia, Athena at Ægina, only hold the balance as even as they do in confidence that the right side—which is their own side—is to win; but the victory is not won, any more than Ormuzd has quite won yet, in the proclamations of Darius. More plainly still, on that archaic pediment from the Acropolis, the "three-bodied monster" is not beaten yet; it is not he, but his divine adversary, who is the strenuous aggressor.

And what their votaries depicted, imaging their own hopes and fears, the Olympian gods had experienced, when the world was younger. For the Olympians had not made the world; they had won it by right of conquest from gods who occupied it before; and before that, too, the world already *was*, fashioned by "assignment" of place and part in it to every kind of being. It was in this sense that *Moira*, "Portion"—ill-translated "Fate,"—was "before the gods." Poseidon could not say that "the sea is his for he made it," nor did Zeus make the "homes on Olympus," as Odin and the northern gods built Asgard. And Æschylus, at all events, like the composer of the *Völuspá*, troubled his great soul "what it should be in the end thereof." Only by agreement with his adversary, last survivor of the old order, but nevertheless *Prometheus*, "he that plans ahead," could Zeus himself hope to escape dethronement by the "child that should be born." And dethroned he was, in due time, though neither Æschylus nor Vergil saw him fall.[1]

This precarious tenure of the Olympian gods has its counterpart in Norse, and (above all) in Iranian belief, wherein it is only if all good things, and good men, do their utmost in support of the source and champion of all good, that the good cause can ultimately win; a conception which illuminates for us the amazing successes of Persian imperial administration under Cyrus and Darius, and makes the collision between Persians and Greeks one of the world's great tragedies. It is not necessary, therefore, to demonstrate the kinship of the "gods of the Greeks" in their aspect as a personal anthropomorphic polytheism, to those other renderings of the beliefs of the widespread users of Indo-European speech, out on the great grassland of Eurasia. Wherever we find them, they are there like their worshipers as intruders, occupying and exploiting a world not their own.

What does, on the other hand, challenge explanation, is that while it is clear that the Olympian gods form a divine dynasty or family group, and to this extent correspond with other Indo-European polytheisms, the individual deities included in this Greek group are, to speak frankly, such a "scratch lot." Zeus alone, "father of gods and men" has a recognizable Indo-European name, but it is not a personal name, only descriptive of a "shining one"; specifically applied to the spirit immanent in the open sky, in the sense which the Latin *Dies-piter*, "sky father," and Vedic *Dyāúš-pitā* retain.[2] How utterly Zeus was a sky-god, before he came to rest on Mount Olympus, like Jehovah on Mount Sinai early in the Israelite "wanderings," is shown by the Greek observation that north of this, in Macedon, men "worshiped the air" under the name of *bedu*,—which may have been their way of saying *dēvá*. Two dynasties of gods before Zeus, there had been another sky-god whose name, *Ouranos*, persisted in Greece as a common word for "the sky." He has his counterpart in the *Varuna* of Aryan India and of the Iranian rulers of northern Mesopotamia

(p. 103). Perhaps the "lady of the dawn," *Eos* (Sanskrit *ūšās* Latin *aurora*) and the "lady of the hearth fire," *Hestia* (Latin *Vesta*) are other heritages from old time, and there are certain groups of coequal deities, with descriptive names, Charites, Mousai, Moirai, Horai, more loosely attached to the Olympic family, as the multitude of Vedic *dēvás* are to the greater "world guardians," *lokapālas*, of Brahman theology.

But here traditional names cease.[3] Apollo is a god of light, and has an epithet *agyieus* "lord of ways," so he may have been men's guide in trackless country, as he presided later over their streets.[4] To his sanctuary in Delos came Hyperborean pilgrims and offerings from "back of the north wind"—or was it only from Locris?[5]—but no other Greek god has these distant affinities, not even the north wind himself, whose name Boreas comes only from Mount Bora in Illyria. But Apollo's own name does not seem to be Indo-European, nor even originally Greek,[6] and that of his mother Leto has been identified with the Carian word *lada* "woman." Demeter, too, has only partly a Greek name; for though the ancients, who were poor philologists, equated *de-* with *ge-* (meaning "earth"), this is not the name of any grain-goddess elsewhere; and in Greece her affinities are mainly not Olympian. Her place in the Olympic family is as a sister of Zeus, like Hera and Hestia, not as his offspring.

As with earth, so with the sea. Poseidon's name, so variously pronounced in Greek dialects, looks foreign, and may contain the same *da* element as Demeter's;[7] also, in far Triphylia, Poseidon mates with a Demeter who is anything but Olympian, horse-headed herself and mother of his horses. But neither a horse-god, nor a horse-goddess, can be primitive in western Peloponnese. From what we know already about the spread of horse-using folk, they must be intrusive, and probably are to be referred, as elsewhere, to the first Indo-European-speaking intruders. Aphrodite was only

"born of the foam" by a local and popular etymology, and people whose language had to borrow a word for the sea, are not likely to have had a sea-goddess, any more than a sea-god.[8] In Aryan theology, it was Varuna, the god of illimitable sky, to whom illimitable ocean was ascribed, but not until his votaries became acquainted with it; and the Greek Oceanus may have had the same experience. Poseidon, too, had lordship over the sea through his sea-consort Amphitrite, as Menelaus had over Sparta through Helen. Aphrodite's proper business, however, is on land. Her eventual association with Eros looks like an identification of a disembodied love-god like the mischievous Kamadeva-Ananga with the "male companion" to a mother-goddess of Anatolian type.

Dionysus, Ares, Hephaestus, and Hermes are even more loosely linked with Zeus and the great Olympians. Dionysus certainly, and Ares probably, are Thracian newcomers, ill-acclimatized, as Homeric descriptions of Ares show.[9] Hephaestus, though, like Ares, he is a minor son of Zeus, is not originally a fire-god, such as occurs in the Aryan scheme, but a smith-god,[10] nor has any other Olympian a special craft like his. Hermes may possibly be Greek, but his function, like that of Ares, is quite subsidiary both in Homer and in later times.[11]

The goddesses are at once numerous and queer. Hera, consort of the sky-god, is neither a sky-goddess nor an earth-goddess, as usual in nature-polytheism, but a very independent lady, of peculiar appearance—with large lustrous eyes, like a cow. She has abodes of her own, where it is Zeus that is the stranger, if he comes at all; but these are not numerous, and are all in the region of east-central Greece, which was once Ionian, except Samos which eventually became so.[12] Nor has Hera any special attribute or function, except to look after women generally, as her name "protectress" implies; otherwise she is simply "queen" as Zeus

is "king."[13] Her special home is in the plain of Argos, not in the Dorian city, but on the other side of the plain, where the Minoan palace sites are; it is probably a survival from such an establishment, for there is a fine "beehive" tomb close by, and the ground is full of Minoan débris, as at Samos.

Artemis, though she is daughter of Zeus, and Apollo's sister in Homer, was not always so. She belongs to the wild woods, looks after deer, bees, and wild nature generally, and with her huntress bow brings sudden death, especially to women; in Attica and Arcadia she just escapes being a bear-goddess; at Ephesus, where her temple stood aloof from the Greek city, like that of Hera in Samos, she was anything but a virgin, and her image was first a shapeless meteorite, then many-breasted like a Hindu deity. In Crete and Arcadia she looks after children and brings them into the world like Eilithyia, whose name, like that of Artemis herself and her Cretan names, Dictynna and Britomartis—"sweet maid" we are told it means—probably goes back to something that is not Greek.

Strangest of all is Athena. Motherless offspring of Zeus himself, she became Olympian by symbolic surgery, like Dionysus, and is anything but an Eve to her Adam.[14] Alone among the ill-assorted family, she has no consort—Demeter, as we have seen, had more than one—yet alone she shares with Zeus the titles *Phratria*, *Polias*, and *Hellania;* the surveillance (that is) of birthright among men, of civic order in cities, and of Greekness among Greeks. More than other goddesses, Athena is infested by her own owls and snakes: alone among Olympians is she represented occasionally by her owl or snake in Attic art,[15] or herself provided with wings. Like Hera she has her own abodes; she is in Homer the only deity (except Apollo with his "house of enquiry" Pytho, and his "unapproachable" home at Pergamum) who has an earthly residence. This is in the "strong house" of King Erechtheus, a fortified palace, identifiable with the citadel

which bears her name. Yet only one other Greek city (Heraea in Elis) bears a divine name, till the Apollonias and Posidonias of the colonial age.[16] On the other hand, town names, which (like Athenae) are feminine and plural, provoke conjecture; Potniae, Alalcomenae (twice), alongside of Pherae, Thebae, Plataeae, Thespiae, Acharnae, and Mycenae. But who were the "ladies" of Potniae? Why is Athena "from Alalcomenae" in Homer? And who was Mycene, of whom also we have a glimpse in Homer?[17] When Greek experience widened, an alternative origin was found for Athena in Libya, and another in Egypt, though it is the same Libyan goddess, Neith, in both regions; and the reason is obvious, for both carry shield and spear.[18]

All the five Olympian goddesses, then, stand a little apart from the seven male gods. There is a shadowy Dione, to pair off with Zeus, but not in Olympus where Hera is queen; nor are Poseidon and Demeter consorts there, nor Apollo and Artemis originally brother and sister, nor Hephaestus so securely married to Aphrodite as to exclude Ares and Anchises, on occasion. All have some aspect of guardianship over women, but this is never primary nor exclusive. All, like some of the male gods, have places where they are at home and paramount.

With Greek lands lying, as they do, on the margin of the great continental region within which the "Great Mother" was aboriginal and long predominant; with a well defined cult of the "Mother of the Gods" in Crete, and numerous local goddesses, such as Britomartis, Dictynna, Europa in Crete, and Aphaea in Ægina, who only just misses being a local Artemis; with some of the chief goddess cults planted on the very fringes of that area, Artemis at Ephesus, Hera in Samos, Demeter and Aphrodite at Cnidus, Athena at Lindus in Rhodes; above all, with "the goddess" of Paphos, Idalion, and other places in Cyprus, nameless because unique at first, though later identified with Aphrodite;—we are

justified in regarding these as older cults which have been identified by Greek settlers, locally and eventually, with the worship of essentially similar nature-powers in the districts from which those settlers came; Hera in Argolis, Artemis in Arcadia, Attica, and Euboea, Demeter in Triphylia and at Eleusis, Nemesis a wild-nature goddess at Rhamnus in Attica; above all, Athena at Corinth, Ægina, Athens, Thebes and other places in Boeotia, maintaining herself quite aloof from all Olympian alliances, while sharing certain of her most general functions with Zeus alone, rather than he his power with her. She had had, like Hera, her own early disputes with Poseidon; at Athens she had won, at Corinth and in Boeotia honors were divided, if we may judge from later cults and coin types; at Eleusis and in some Boeotian sites Poseidon's subterranean functions seem to have fallen to various minor personages, Aidoneus, Amphiaraus, Trophonius, perhaps also Erichthonius at Athens. Only on the capes at Sunium and Taenarum and on the islet of Calauria does he rule unquestioned as sea-lord; and Calauria he had by exchange.

From the quality of Olympian goddesses we have discerned one widespread cause of anomaly in Greek religious beliefs, the prevalence of cults resembling that of the Great Mother in Asia Minor; though we must beware of the assumption, currently made but sometimes without sufficient reason, that all female personifications of the reproductive forces in nature in Greek lands are loans from one Asiatic source, or even that there was in early times any single source for this notion even in Asia Minor. What for example is the relation of the "Great Mother" of classical Phrygia to the great Hittite goddess at Arinna, who was solar? All that we know is that, in Minoan culture, goddesses are commonly represented with quite as various emblems and functions as the Olympian goddesses afterwards; and that, afterwards also, Greek enquirers equated the Mother of Atys in

Phrygia with the Mother of Zeus in Crete. And when we come to consider archaeological evidence commonly submitted in support of this assumption of a single widespread cult of a mother-goddess, we shall find that some of it is not demonstrably relevant, and admits another explanation.

A second set of disturbances, no less instructive, is exposed when we study the local differences between the cults of the same Olympian deity, from Zeus downward, and still more outside the inner circle of beliefs and rituals. Associated more or less closely with Zeus himself as "father of gods and men" generally, many minor deities were worshiped, some widely, some only here and there, with similar ritual. Some of these are clearly personifications of natural forces or human institutions, such as Helios, the sun, Eos, the dawn, Boreas and the other winds, or "lightnings and storms," quite impersonally; Pan is god of flocks and pasture, and goat-like himself; Hestia is the hearth fire, Nemesis the principle of order, in nature and society alike, resentful of all breach of that order; and there are many others, sometimes nameless, or with only a general name; gods (for instance) of "aversion" or "birth" or "justification." And to some of them special offerings were appropriate.

Between "gods," in the full sense, and their worshipers, there was however always the same human relation of cheerful, friendly, respectful confidence. Worship consisted essentially in a sacrificial meal shared between the god and the congregation, and accompanied by prayer, song, music, and dance. Burnt offerings were the god's share of the feast; when blood had to be shed, it was shed or sprinkled upwards, and in daylight. Not all communities maintained "dwelling places" (*naoi*) for all gods, but only for those who for one reason or another were "customary." From time to time on a special occasion a fresh god was domiciled, as Olympian Zeus himself was domiciled by Pisistratus at Athens.

Divine dwellings remained primitively simple, a glorified hut with a porch, perhaps also an anteroom, and sometimes a storeroom in rear; sometimes this too had a porch, or there were wide eaves supported by upright posts all round the building. Original timber construction left its mark to the last, in chamfered shafts, low gables resting on the flat lintel, projecting beam-ends between lintel and eaves and a deep wall plate inviting continuous frieze of ornament. This uniform plan of construction goes back directly to the *megaron* of the Mycenaean mainland, a single room with single door and portico, standing free in a courtyard, and insulated from any complex of rooms and corridors which might be huddled round it in the haphazard Minoan fashion, as we see it at Tiryns and Mycenae, in Melos, and on the Athenian Acropolis. Here the god "lodged," at will or on request, sometimes in the bodily form of a cult statue, sometimes still in a meteorite or ancient symbol; his furniture, often lavish, had been accumulated in generations of thank-offerings. His priests were his housekeepers, hereditary or nominated, and little more. They ministered to his ritual needs, but they did not live in his "dwelling" any more than he lived in any chapel of theirs, as Minoan deities had dwelt in kings' palaces. Sacerdotalism was as alien as mysticism, in Olympian religion. Wronged or insulted, such gods took their own revenge; invoked as witness of a transaction or a promise, they would exact fulfillment. Thus they guarded public law, personal honesty, and the sanctity of local usage in private life; they protected their worshipers, powerfully supported the higher aspects of political and social behavior, encouraged and rewarded self-respect and reasonableness between man and man. The likenesses are fundamental and close between all this aspect of Greek religion, and the early beliefs and practices of Aryan India and Teutonic Europe.

The "Gods Below" and Their Chthonic Cults

But there were other powers, none of them so potent as the greater Olympians, but widely observed, and feared rather than respected, though most of them were more locally limited, and many were only worshiped at some one place. Blood was offered to these powers, too, but it was shed or poured into the ground, and either with it or after it came a triple outpouring of honey, wine, and water. The sacrifice, usually a black animal, was buried, unburned and uneaten, sometimes in a cave or at night, always with gestures of propitiation, avoidance, and gloom. Sometimes we know the cause; there was a cult of Fear itself at Corinth, of "Retaliation" *poiné* in Argolis, and a few cults of other monsters and bogeys.[19] These powers were of the earth, or from beneath it; from earth they could themselves emerge or send up their symbols, green herb or creeping thing. With these powers, Zeus had but vague relations; some part of their domains he had invaded, for he was addressed locally as "Earthly" and "Propitiatory"; and Hades, lord of the "unseen," was in a sense himself the "allseeing."

Now there is nothing in the objects of these cults which separates them, any more than the countless quaint prescriptions and prohibitions of Greek folklore and magic, from the lesser Olympian deities. The contrast is partly in their localization; partly in the generic differences of relation between god and worshiper, shown in the ritual; partly in the very imperfect personality and humanity with which they were invested even in appearance. Frequently they have no names, or names merely expressing their functions, like the "Bean-grower" on the road to Eleusis, the "Fly-catcher" in Arcadia and Elis;[20] many had no statue or vehicle except a block of stone, or other natural object,

of symbolic shape or none. Some of them are monsters, like the fish-tailed Eurynome, near neighbor of horse-headed Demeter. How vague was the distinction between "chthonic" and "Olympian" in this respect, is evident from the worship of Artemis at Brauron by girls dressed as bears, of Zeus at Corinth by boys in ram skins; and from the Dionysiac "goat dances."

In the last four examples, and in many titles borne locally by Olympians, like Apollo the "mouse-god" or "locust-god," or "wolf-god," or Demeter the "green goddess," the humaner cult seems to have superseded a cruder notion of deity, without abolishing it or even suppressing performances, of which the meaning was sometimes so far forgotten that the symbolic explanation had been replaced by what the Greeks themselves called a "myth," that is to say an explanatory narrative, as for example that somebody was once turned into a bear "and so we all dress up as bears," much as Christmas mince pies devoid now of minced meat are said to be the "frankincense and myrrh" of the Wise Men from the East. In some parts of Crete, for example, the infant Zeus was "nourished" by a goat or other animals, as at St. Neot's in Huntingdonshire the Saxon saint was fed by miraculous fishes; and the ox and ass have never quite been banished from pictures of the Nativity.

Now it would be natural to expect that in our earlier glimpses of Greek religion, these cruder and more barbarous features would be more frequent and conspicuous, and the humane Olympians less clearly distinguished from symbols of mere powers of nature. But in the Homeric poems,—which, whatever their precise history, are by far the earliest Greek texts that we have, and profess to describe the life of an age already bygone—it is the nature-worship, the magical rites, the gloomy ritual of "gods below" which is almost absent, and the wholesome humanity of the Olympians that is accentuated almost to caricature. The other kind of

observance is not absent, however; the poet knows of it, but it did not interest him, nor presumably his audiences, unless it was already "in the story," like Odysseus' sacrifice in the underworld.

Heroes in Classical Greek Religion

This is especially notable in respect to one class of observances and beliefs which is likewise almost absent from Homeric poetry, but was very common, and became commoner, in classical Greece; namely the worship of what the Greeks called a "hero."[21] The word, like the name of Hera, seems to mean simply "strong to save." Hesychius translates it "strong" or "noble." In Homer there are plenty of "heroes," but they are not worshiped after death. Alive, they are "honored as a god among the people," but not because they are specially beloved by a god, or descended from him, or devoted to his service, though there are priest-kings in Homer, and some of them are good fighting men. It is for their own worth and qualities that they are honored so; for leadership and personal prowess. Occasionally there is specific skill, in healing for example, but usually their distinction is quite general; they are "shepherds of the people," "masters of men." But when they die, all this forsakes them. As Odysseus sees them in a dim desolate abode by the Ocean-stream, they are "strengthless heads"; they twitter and flutter like bats, till the shedding of warm blood into a trench revives them; a mere day laborer on a poor man's farm is better off than the greatest of them. For Homer's "heroes," as has been said, are the least "other-worldly" of all ancient peoples.[22] For this very reason, even the prospect of such a "latter end" did not trouble them, because "the average Achaean simply did not think much about it." Least of all could the dead return; they were regretted, but no longer operative, for good or for evil.[23]

Quite different is the position of a "hero" in classical Greek religion. In the first place all kinds of persons might, on occasion, "come back" after death; there was even a kind of "All Souls' Day" when each family in Athens awaited its own deceased members, entertained them while they were loose, and kindly but firmly swept them off the premises with a broom when time was up. At all seasons, fallen crumbs from the table were left "for the heroes," as German peasants leave them "for the poor souls"; and if you did not want a particular soul back—if for instance you had murdered a man—you could maim him to prevent this; as formerly, when a man killed himself in England

> "They buried him at the four-cross-roads
> With a stake in his inside."

In later times a quite ordinary person was sometimes described as a "hero" on his gravestone.

But there were others, whose continued presence and assistance was desired, and was believed to be assured, by establishing for them "the worship of a hero." The founder of a new city was always so honored by a chapel and altar on consecrated ground at his tomb, with provision for a priest to be in charge and perform the customary acts of maintenance and worship. Occasionally other persons were thus honored, for exceptional leadership or other distinction in life.[24] Now there is no evidence of the belief that the hero's life-soul necessarily remained, or returned, though there were stories about heroes who reappeared. What it was desired to conserve was not his ghost, but what is perhaps best described as his "influence"; that quality of "push" and leadership in him, which had marked him out from others, and made him beneficent in life.

Occasionally, the remains of an ancient "hero" were dug up and transferred to another place and people. We are told of heroes sent by one state to help the army of another,

like the "ark of God" to help the Israelites in war:[25] and again, of one "hero" being brought in to get rid of another whose enemy he had been in life.[26] You could have part of a hero, like the missing shoulder of Pelops,[27] or the arm of Saint Anthony of Padua; or no bones at all, but ritual at an empty monument.[28] Sometimes it was not the site but the hero's name that was forgotten, perhaps because, like other "genuine secrets," it had been concealed overlong; certainly some heroes' graves were deliberately concealed, their contents being so valuable. In addition, some heroes, nameless and otherwise, had functions so special, like the "plough-tail hero" at Marathon, or so general, like the "guardian" at Delphi, that it is difficult to distinguish them from the small local "nature-powers," with similar underworld habits and fertilizing grace, and similar anonymity, like the "unknown god" noted at Athens by Saint Paul.

Now though "hero cults" are so common in Greece, they do not appear in Roman religion, any more than Roman deities marry. Yet many Roman families buried their dead under mounds, or in enclosures, like the "mound" or "enclosure" which often marked the place of a "hero cult" in Greece; and the Romans had similar belief that the snakes which haunt such spots were manifestations of the dead occupants. We have therefore to look for some event or circumstance demonstrable in the history of Greek religion but absent from Roman, which may explain both the frequency of hero-worship among the classical Greeks, and the use of the word "hero" to describe the subjects of these cults and rituals.

First it must be remembered that in the Homeric poems there are no "hero cults," that the word "hero" is usually applied to the living, and that a man who was a "hero" in life has no influence on the living when he is dead. It follows that the worship of "heroes" came into vogue later than the period of culture which the Homeric poems describe,

though the ritual so closely resembles that of the "chthonic" deities whom we have seen reason to regard as pre-Olympian, that it seems reasonable to regard it as a survival from some such ceremony at a tomb as is depicted on the Minoan sarcophagus from Agia Triada, and demonstrated by the trenches and ritual vessels which have been found in the entrances of several Minoan tombs.[29] At Menidi in Attica such observances went on from Late Minoan times to the fifth century; but we do not know that there was a "hero cult" at this tomb.[30]

Next, in the *Works and Days* of Hesiod, an "Age of Heroes" is interposed, in the retrospect of ancient times, between the "Age of Bronze" and that "Age of Iron" which describes Hesiod's own time and is dated to the middle of the ninth century B.C. by his astronomical reference to the rising of Arcturus.[31] The men of the "Golden Age," he says, when they passed away in the days of Kronos, before Zeus began to rule, became "*daimones* of good upon the earth," minor deities of the "nature-power" kind, like the Sanskrit *dēvás*, promoting fertility, presiding over seasons, and so forth. The "Silver-Age" men "did not worship the gods" and became merely the blessed dead, or more literally the "blissful corpses," as though the term originated from the discovery of richly equipped interments not associated with recognizable symbols of religion, nor sites of temples in the Greek fashion, nor any abiding memories.[32] About the "bronze" men, he has more to say. They fought with one another, and had bronze armor, tools, and houses. They "did not eat bread," the staple diet of the "heroes" in the Homeric poems, and of ordinary Greeks of later times; they lived therefore mainly on meat; as the Vlachs in Greece do now. And they were "born of ash-tree nymphs"; came therefore out of forests, such as still clothed Pelion and other northern ranges in the Homeric age, and yielded spear shafts for living "heroes'" use. The "bronze" men killed one

another, and went down to cold Hades, nameless. Then came the "Age of Heroes," men of a race "more orderly and braver": they were "half-gods"; but war and strife destroyed them, some at Thebes, others at Troy,—so their date and doings were known: they are indeed the "divine-born" dynasties of whom Homer sang. The rest of them, too, have passed away: for Zeus "gave them a maintenance and harvests apart from men, and settled them at the ends of the earth [and far from the deathless gods; among them Kronos is king[33]]. They live, with soul untouched by sorrow, in the Isles of the Blest beside deep-eddying Ocean; blissful heroes, for whom the bounteous earth beareth honey-sweet fruit thrice a year." No wonder that on a poor soil like that of Greece, men conserved the mounds, enclosures, and libation-pits of such "heroes," in the hope that some of that virtue might filter back into the fields around.

This destiny is different from that of the "golden" men, who move "upon the earth," not buried in it, doing their good work for men. Only to one of the Homeric heroes, Menelaus, was this alternative to the common fate of dead men foretold in the Homeric poems themselves, and to him only because he had "become the son-in-law of Zeus" by marrying Helen, partaking thereby of the divine nature.[34] But in Hesiod's account, all heroes who survived the great wars had passed that way. As, however, Menelaus and Helen were worshiped together in classical times at Therapne outside Sparta, and Helen at all events was credited, like a medieval saint, with a personal apparition to the skeptical poet Stesichorus, and a miracle personally performed on an ugly child,[35] it is clear that (unless Proteus was mistaken) residence in Elysium was compatible with continued and effectual interest in human affairs, as well as with the enjoyment of a cult at the former place of abode, perhaps even at an actual tomb, such as was shown in antiquity at Thera-

pne.[36] The ritual of hero-worship was, however carefully distinguished from that of divine service: and though the tomb of a hero would be described as an "altar," a different set of words was in general use to describe their sacrifices. These offerings were buried, not eaten; were offered sometimes at night, and usually on an anniversary; and were accompanied by games of strength and skill, like those for Pelops at Olympia, where his "enclosure" is far older (as its contents show, though it was not his tomb) than the "dwelling" of Olympian Zeus by its side.[37] Such funeral games were usual for Homeric chiefs, and were customary among the Thracians in the fifth century.[38]

Hero-Worship Presupposes a Political Crisis

Though many peoples in early states of culture, ancient and modern, have traditions or myths about the great men of the past, it is comparatively seldom that they have turned them into "heroes" in the classical Greek sense.[39] More usually "no practical notice is taken of them": though romances and even myths are told about them, "the hero, apart from the ancestor, has slight chance of being worshiped while he is still recognized as a human ghost." What seems to be essential is such a break in the cultural life and historical traditions of a people, that the occupants of certain tombs are recognized, first, as being of a different kind from those who are being buried by their kinsmen today; secondly, as having been exceptionally powerful or effective in their own lifetime. For example, shortly after the conversion of the Northmen to Christianity, there was a reaction to paganism, and "they built a temple to King Eric, who had died long before, and began to offer to him vows and sacrifices as to a god," for help in their present need.[40] Another hero of the tenth and eleventh century "because of his popularity was worshiped when dead" under a fresh name; another "received sacrifices offered to ensure a plentiful

harvest." The body of another was claimed by four districts, and divided among them, "thinking that they who got it" like the shoulder of Pelops "might expect to have plenteous seasons thereby." Here too there were traces of an older crisis of the same kind, for Ingvifreyr, from whom the Swedish kings claimed descent, seems to be also the ancestor of the Ingaevones of Tacitus, a thousand years earlier, but had meanwhile become a mere fertility deity in common belief. The parallel with Greek usage is all the closer, because in the north "men drank also a cup to their dead kinsmen who had been buried in mounds, and that was called the cup of memory" like the second libation in Greek ritual which was "to the heroes" in the same literal sense, and, irrespective of any worship paid to them individually. The transition however was beginning when the Gothic migrations began, for "their ancestors, who excelled in good fortune, they called not mere men, but half-divine, that is *ansas*."

What then was this crisis, whereby "the deeds of a single man can glorify a place, in itself of little worth" as one of Haddon's natives told him in Torres Strait? In that instance, as in that of King Eric, it was the spread of a new religious cult that "reacted socially" and canonized "strong or noble" men of the olden time as recipients of appeals for help; they become, as Wundt says, a "projection of human hopes and wishes." This is something quite different from the rôle of a "culture hero" like Hiawatha, of the deified kings of Babylonia and Egypt, of distinguished ancestors like the Brahmin "*rishis*," of an "august child" like Yamato-dake in Japanese romance, or of a tragic figure in history, like Saigo Takamori who was "raised to Mars" in 1877. It has indeed its nearest counterpart in what Xenophon described as the "heroes who occupied the land of the Medes and watch over it," whom Cyrus the Persian was careful to conciliate, as well as the Median gods.[41] For here too "a

local celebrity has culminated in a local worship," though not quite like that of a god. Occasionally the same individual passes historically through all stages. In China, for example, Kuan-u, beheaded in 219 A.D., was remembered "for exemplar only," till he was canonized in the twelfth century, and he was deified, by another dynasty, only in 1594.

Once established, however, and the crisis which established them once over, the class of "heroes" clearly received numerous recruits; not "faded gods," however, but rather certain old "nature-powers" never promoted to deity at all, but now so far personified that, from being "daemons moving upon the earth" like the men of the Golden Age, they were translated to the "Isles of the Blessed." Thus unlike the great men of Israel, if "their name liveth for evermore," it is because of the new conviction that "their bodies are buried in peace" where each old sanctuary stood.[42]

It has been necessary to devote so much attention to the Greek "heroes," because it reveals to us another aspect of the contrast between Olympian and other kinds of deity. Just because the Greek "heroes" are not gods and never were gods, but are dead men whose power for good has been found not to have failed (like Christian saints "resplendent with the glory of miracles"), they bring the whole problem hard down upon the touchstone of historical fact. When was it, and why, that Homer's heroes, and such as they, were found to have still this power after death, so that their "mounds" and "enclosures" became places of worship, and sources of help at need? If we can determine this, it will go far to give us at all events a terminal date for the establishment of those Olympian gods whose humanity is revealed most purely in Homeric narratives of those "heroic" lives. This is a question which can only be answered by the convergence of two distinct lines of argument; from the archaeological evidence for such a catastrophe, and from the traditional genealogies of men of the "Heroic Age"; it is accordingly postponed to Chapters V and VI.

Minoan and Hellenic Cults and Ritual

Without rushing to any conclusions as to the date either of the coming of Zeus and an Olympian household of some kind into Greek lands, or of the final acceptance of the "twelve gods," whose joint altar at Athens is first mentioned in an episode of the late sixth century,[43] it will clear the argument at this point, to note the principal points in which the religion of the Minoan Bronze Age differs from the Olympian, and resembles the Greek cults most alien to Olympian worship in historic times. This will at least indicate the limits within which *non*-Olympian observances are likely to be also *pre*-Olympian.[44]

Old Ægean sanctuaries are of two kinds, holy places on hilltops or in caves, and chapels in houses and in the great "palaces." The natural sanctuaries are roughly fenced with stone, and contain sometimes a hut, sometimes merely votive offerings, vessels and other gear, scattered or stored. The less perishable offerings include vessels of clay, implements or models of them, figures of people or animals, domestic, merely wild, or noxious; all kinds of objects in fact to which the attention of the deity was desired, or through which it might be assured to the worshipers themselves. In Cyprus, such open sanctuaries were in use all through classical times, though they have not been traced back beyond the Early Iron Age. The maintenance of a bonfire in such a hilltop sanctuary of Middle Minoan date, at Petsofà in eastern Crete,[45] does not seem to have disturbed those theorists who make a distinction in time between primitive "fireless" devotion of objects to "gods below," and subsequent burnt offerings to Olympians: but the Minoan use of fire altars, as well as of "tables-of-offering" and "libation-tables" seems to be well attested. Libations were sometimes but not always threefold, recalling the Greek combination of honey,

wine, and water: sometimes they were poured into hollow figures of bulls and other animals, symbolic or sacred. Objects of veneration included natural stones of unusual shape, or conical or domed, the "residence," or *baetyl* (like the Semitic *beth-el*) of a divine force; sacred trees, carefully tended and sometimes planted in pots; columns or posts, perhaps representing the dead trunks of such trees. Other columns which sometimes support part of a lintel and roof seem to be symbolic abbreviations of a portico or shrine; but Minoan perspective represents a background above not around the nearer objects, and is not always easy to interpret; some of these columns therefore may be architectural accessories, not objects of worship. There were various sacred or symbolic animals, sphinx, griffin, lion, deer, bull, doves and other birds, snakes, bees, and butterflies. Especially common symbols are the bull's head, representing the vital force of the deity; the double axe, for his power to strike; the 8-shaped body-shield, for protection; and the knotted sash, for the sacramental union between god and votary. The word *labrys*, said to mean an "axe," survived in the name of the sanctuary of Zeus at Labranda in Caria; of Zeus Labranios in Cyprus; of the Cretan "labyrinth," which harbored the monstrous "bull of Minos"; perhaps also of the Labyades, a priestly family at Delphi, and of Artemis Laphria at Calydon. With the symbolic shields we may compare the *ancilia* which symbolized the god Mars in Rome, where there are other curious parallels to Minoan worship, such as the sacred fig tree. But the shield deity on a painted slab from Mycenae is female.

Deities are also represented in human form, though, being in ordinary dress, they are not easily distinguished from worshipers engaged in ritual acts. But there are both male and female figures dominating (or escorted by) lions, deer, or birds; women standing on a mountain top or a pile of stones, seated beneath a tree, attended by sun, moon,

double axe, shield, bulls' heads, and other religious symbols, and escorted or adored by other persons. Other women have a male companion, armed or surrounded by rays of light: and if these women are divine at all,—as is commonly assumed—they may be goddesses with a consort like the Attis and Adonis of the "Great Mother" farther east. Male deities are rarer, but there are armed men escorted by lions, and unarmed men in symbolic association with them. Acts of worship included gesture, music, dance, and the gathering of flowers or branches from the trees within a sanctuary. Sometimes the dancers wear masks, or whole skins, of lions, bulls, deer, and birds. Monsters with lion's head and feet, standing erect, in a lizard-like disguise with trailing tail, may be either masqueraders, or more probably the demons they personated; usually they carry libation vessels, and sometimes they minister to an altar or sacred tree. The dangerous acrobatic sports, with charging bulls, may also be impersonations of divine might, or enhancements of it, to which there are widespread parallels. Bulls and other victims were sacrificed at shrines: but the altars are usually small, and there is no representation of a sacrificial meal. On the contrary, the blood of the victim is poured into a vessel on the ground, and funnel-shaped vessels for accurate pouring are frequent, and are represented in processional scenes. In tombs, shrines, and palace courtyards there are libation trenches and pits containing bones and animal refuse. Similar blood-offerings are made before a shrine containing apparently a shrouded corpse; as this scene decorates a stone coffin, it represents more probably a funeral ceremony than any posthumous cult like that of a Greek "hero." Offerings and occasionally human victims were buried before the doorways of the more stately tombs.

Deities and Cults in Asia Minor and Pre-Minoan Greece

It is easy to find analogies to these elements of Old Ægean religion. In Asia Minor monuments of various periods, usually ascribed to the Hatti, illustrate the worship of mountains, rivers, springs, and trees. A few deities in human shape, both male and female,[46] are characterized by weapons and other emblems, and are accompanied by, or stand upon, a lion, bull, or other sacred animal. Principal deities of this kind are a storm-god, Teshup, who was also war-god, standing upon a bull, and a mother-goddess, worshiped at Comana under the name Ma, with a young male companion, and a symbolic lion. It is not certain whether the great goddess at Arinna, who was apparently a sun-goddess, was identical with the lion-goddess, or different. Another figure, wearing short skirt, girdle, coat of mail, and the high horned cap of a male god carries battle axe and dagger, and guards the city gate.[47] Being beardless, with rather prominent breasts, this personage has been interpreted as a goddess; but Hittite art is not always precise in its modeling of clothed figures. A male god, bearded, holds ears of grain, and a grape-vine. Minor powers are more symbolically figured, a double-headed eagle, a lion-bodied monster, and so forth. The names of several deities are known only from their occurrence in personal names. Foreign deities[48] such as Asshur and the Syrian Reshef were recognized if not incorporated in this pantheon; and, most significant of all, the Aryan deities Mithra, Varuna, Indra, and the twin Nasatya were at all events admitted, along with Babylonian gods, among the guarantors of a treaty with the Mitanni people, though there is no evidence that they were worshiped by the Hatti-folk themselves.

Ritual scenes show the pouring of libations from a jug into a larger vessel on the ground: as there are sheep and goats in attendance, probably the offering was of blood. Occasionally libation is made at an altar, on which an offering lies: consequently burnt sacrifice is not excluded. The "lower temple" at Boghaz-keui contains a large pedestal but whether it supported a statue, an altar, or a table of offerings is not evident.

In all this, the resemblances between the Minoan and Anatolian cults of great goddesses, and between the rituals of libation, are obvious; so too is the background of nature-worship. The storm-god with his battle-axe recalls the worship of the double axe in Crete, and of "Zeus of the Axe" at Labranda in Caria. The armed goddess (if it is a goddess) combines the rôle of an Amazon with those of Athena and the shield-goddess from Mycenae. The goddesses escorted by lions and a male consort have their counterpart in Cretan art work: so too has the bull, as symbol and victim.

Analogies with the religious beliefs and observances of the Hatti and other peoples of Asia Minor are thus fairly common. On the other hand there is nothing distinctively Babylonian in Minoan religion, and the prominence of the cult of the Great Mother in Babylonia itself is apparently not primary, but due to North Syrian influence about Hammurabi's time, not long before 2000 B.C. Still less is there in Minoan belief or practice anything specifically Semitic. On the other hand, some of the composite monsters have hippopotamus heads, recalling the hippo-goddess Ta-urt in Egypt, and occasionally baboons are represented in ritual scenes; there was also a snake-goddess Wa-zet in the Nile Delta, and at Sais an armed goddess Neith was symbolized by a body-shield. In Minoan religious ceremonies a rattle identical in form with the Egyptian *sistrum* was used. There was therefore certainly an Egyptian element at all events

among Minoan representations and ritual accessories; but it was hardly more than is recognizable in the later stages of classical Greek religion, when intercourse was frequent again between the Ægean and the Nile.

On the mainland westward of the Ægean, there is very little evidence for early ritual before Minoan culture spread thither. It is not certain for example that the refuse pits beneath the floors of early houses, at Orchomenus and elsewhere, served any religious purpose. The slab-lined graves on Thessalian sites are furnished according to much the same ritual of interment as those of the Cyclades, and in any case prove nothing about either gods or heroes. The curious Thessalian idols with clay bodies and rudely shaped heads of stone belong to the widespread class of representations of a "Great Mother"; but the resemblance of some of these stone heads to neolithic axes, even if it was intentional, hardly justifies the belief that a symbolic axe was worshiped here too, though such a symbol for a thunder-god or sky-god is almost inevitable.

All this does not carry us far; in particular it does not distinguish clearly between the ritual of divine worship and the cult of the dead. But this is in itself significant, for the rituals of "hero cults" and non-Olympian cults in Greek times are so closely alike that it is certain that those who created the worship of heroes were already worshiping both dead men and nature-powers in the same general fashion; and in spite of Homeric silence about hero-worship, the procedure of Odysseus when he employs exceptional means, under special guidance, to revive a dead hero and get his help, supplies the link of Homeric tradition and belief between pre-Homeric and post-Homeric practices.

The Personal Appearance of Olympian Gods

We have now found approximately the stage in religious development at which the Greek hero cults were instituted, and a reason for their establishment. Can we find any similar clue to the occasion and cause of the introduction of Olympian gods into Greece? An answer seems to be given by the physical build and appearance which the Greeks of later periods ascribed to these gods.

Let us begin at that end of the story, where the originals are before us. A few fragments of fifth-century sculpture in white marble show the flesh parts carefully polished as if to imitate ivory, and the hair heavily primed with a red color over which remains of gold leaf are still in place. These statues were certainly meant to represent a fair-haired type. The Varvakeion Athena, a late copy of the fifth-century masterpiece of Pheidias, has the face similarly polished, and though there is no gilding on it now, we have contemporary evidence that the original was of ivory and gold, and the later eye-witness of Pausanias, both for this, and for the statue of Zeus at Olympia, another masterpiece of Pheidias, and also for that of Hera by Polycleitus, and of Asclepius by Thrasymedes.[49] Athena, as we shall presently see, was conceived as "gray-eyed"; and the proof seems complete that in these statues the hair as well as the clothing was of gold, like the gilded hair of the marble heads with which we began. We reach then the conclusion that the classical Greeks believed that some at least of their principal deities were fair-haired.

How many of these deities were thus characterized? Poseidon in Homer has always the "blue-black" hair[50] which is normal among people of Mediterranean physique. Zeus, in the only Homeric passage which describes his personal appearance, has "blue-black" eyebrows likewise:[51] and it was

this passage to which Pheidias acknowledged his inspiration for the statue of Zeus at Olympia. But that statue, as we have seen, was wrought in ivory and gold; unless then we are to suppose the employment of some third material (of which there is no trace in extant references to this statue), Pheidias was referring not to color, but to pose, and abundance of hair, as is clear from the numerous representations of it on coins. Hera is not described in Homer, but on a fifth-century vase she has yellow hair, and the statue in her Argive temple was of gold and ivory. Demeter in Homer is *xanthe*, like Athena in Pindar,[52] but it is an obvious criticism that this epithet may refer to the color of ripe corn, of which Demeter is patroness. While therefore this reference is of value as to the meaning of *xanthe*, it does not prove more about the appearance of Greek deities than that no incongruity was felt in giving "Our Lady of the Grain" grain-colored hair. Aphrodite in Homer is simply "golden."[53]

Pindar alludes to Apollo's "golden hair," and describes Athena by the epithet *xanthe*, and in another passage couples *xanthe* with the Homeric epithet *glaukôpis* which we shall presently find to mean "gray-eyed," a normal accompaniment of fair hair, though found also among persons of brunet appearance.[54] What Pindar meant by *xanthe* we know from his description of a flower bank with "rays (spikes or petals) of *xanthe* and full purple."[55] Of the same flower, *ion*, the botanist Theophrastus mentions, after other varieties, "the white *ion*, and still more the flame-colored, and then the black, which needs care all the year round."[56] Etymologically *ion* is the equivalent of the Latin *viola* but it is not certain to what flower or flowers the Greek word *ion* was applied. But any flower which included white, flame-colored, and black varieties,—like our pansy and iris, to name only familiar kinds—certainly included also all tints of cream and yellow, as well as full purple.[57] As such flowers also have brown varieties, the possibility cannot be excluded

that *xanthe* also may include "brown," and the verb *xanthizein* is used for the color of fried fish. But that it did not always mean "brown," but usually "yellow" or "golden" is clear from its use for gold itself, for ripe corn, for sandy soil, for the discoloration produced by jaundice, and for "white" wine, of which there are now all tints in Greece, from "hock" to "madeira." It is the name of several rivers, and no one who has seen either the Lycian or the Mysian Xanthus in flood[58] doubts that a pale sandy color is meant. It is important to note that both these rivers are known to the *Iliad*, where the word *xanthos* is also the proper name of one of the horses of Achilles;[59] his yoke-fellow is *balios*, "dappled." On the other hand, later writers distinguish the "flaxen" hair of the Belgic Gauls as *polios* which properly describes the hoary hair of old age, and is used of iron by Hesiod.[60]

Returning now to the classical use of *xanthizein*, we find it employed for changing the natural color of the hair, and dyed hair is contrasted with hair that is of that color "by nature," *xanthophyes*. Fortunately we can test this process, for the herb which was used, *Xanthium strumarium*, does actually turn human hair not brown but golden yellow, and is commonly used still as a yellow dye. It was noted in antiquity that this hair-dyeing was especially prevalent among the ladies of Thebes,[61] one of the reputed centers of intrusive folk in the twelfth century, but though these invaders are described by the general name "Æolic" meaning "variegated" or "patchy," no positive conclusion follows as to their appearance, for the Greek word may be only a popular etymology for some tribal name of which the meaning was forgotten. The clue however deserves to be followed, in view of the contemporary evidence for a blond strain among the historic Greeks themselves as well as among their gods.

Fair Hair Among Heroes and Classical Greeks

Now Bacchylides in the fifth century describes the Spartans as fair; and alludes also twice to blond athletes at the Nemean Games.[62] If Apollo was in any specific sense a "Dorian god," his "golden" and "uncropped" hair, celebrated by Pindar,[63] would support the testimony of Bacchylides, the description in Herodotus of the Spartans combing their long hair before the last fight at Thermopylae, and the Homeric epithet *trichaïkes*, which may mean "with waving hair," on the one occasion when Dorians are mentioned in the poems.[64] But Laconia, like all eastern Peloponnese, had been "Achaean" before it was "Dorian"; there were blond leaders among the Achaeans in Homer, and Menelaus king of Sparta was one of these; Pindar speaks collectively of the Homeric Danaans as "fair-haired"[65] and Apollo, though not on the Achaean side in the Trojan War, was a great and well-known god. Clearly it was not the Spartans who introduced blondness into Peloponnese; though if they were themselves blond in Pindar's time, their strict inbreeding after arrival makes it certain that they were already so when they came.[66]

In view of the belief of ancient writers that in Attica, if anywhere, there were "earth-born" aboriginals, and that Attica had never been permanently invaded by anyone, it is natural to expect that here at least the older elements in the population would be preserved in at least relative purity. It is disconcerting therefore to find that the great Attic goddess Athena, though not in the fullest or strictest sense Olympian, was nevertheless gray-eyed from Homer's time onward, and also fair-haired for Pindar and golden for Pheidias.[67] Nor are things any simpler when we examine the Attic population.

Though the vase painters of the sixth, fifth, and fourth centuries usually painted in black on a red clay, they sometimes rendered hair and beard in the same purple as is used for clothes and bronze work. Later they diluted the black glaze-paint so as to produce a "half-tone" effect, and occasionally employed this to render a contrast of light and dark hair. When this serves to identify a fire demon, tormenting a soul in the Etruscan hell, or to distinguish the dawn-goddess Eos from her mortal lover, it need not be more than symbolic, like Demeter's epithet *xanthe;* but there is no positive reason to depict maenads or a sea monster or the West Wind as blond,[68] nor to contrast blond Sleep with brunet Death when they carry the body of Sarpedon. On the other hand there was a reason for giving Peleus lighter hair than the sea-goddess Thetis, because Peleus became the father of the "yellow-haired" Achilles, and grandfather of the "red-haired" Neoptolemus.[68] These however are personages of myth or tradition, not inhabitants of Attica: they prove neither more nor less than the blonde Virgins and angels of Italian painters. It is quite another matter when the painters of polychrome scenes, on the "white ground" vases of Athens, use frequently a warm terra cotta brown (brightening to brick red) for the hair,[69] whereas they had a dark umber at command; still more when they employ the dark umber for one head in a group, and clear tints of ochre for another.[70] Sometimes, it must be admitted, the dark woman is the mistress and the fair girl her maid, who may have been a foreign slave, like the Xanthias who serves Dionysus in the *Frogs* of Aristophanes, under a nickname which we may translate by "Sandy." But in other scenes it is the master or the mistress who is blond, and the servant has dark hair and therewith the pug nose of a Socrates. Contrast of fair and dark types comes out well in the scene where two boys deal with a snake; the elder, who is fair, attacks it with a stick; the little dark fellow looks on.[71] Here

there is no doubt that the painter was enhancing the contrast of temperament by appropriate contrast of physique.

How far back can this blond strain be traced? When did it appear, and whence did it come?

Pindar,[72] as we have seen, describes the Danaans of the Heroic Age as *xanthokomoi*, "golden-haired," in the war between Argos and Thebes traditionally dated late in the thirteenth century. This is the only ancient passage in which the word is used of a heroic people in general; and it is in retrospect, seven hundred years after the event. But there was reason for Pindar's belief. In the Homeric poems,[73] individual heroes are described as *xanthoi*, Menelaus, Achilles, Odysseus, Meleager, and also one woman, Agamedé, and one personage, Rhadamanthys, two generations earlier.[74] In view of the significance of red hair as evidence of blond parentage, we must note here the name of Achilles' son Neoptolemus, who was also called *pyrrhos* "red-head," like his namesake and descendant in the third century;[75] perhaps also Achilles' friend Phoenix, for the epithet *phoenix* is applied to a bay horse and to the orange-flowered palm tree, as well as to "redskin" seafarers. Such epithets are only likely to be given when this kind of hair color is exceptional.[76] We may therefore be sure (as we are already encouraged to be by the occurrence of red hair at all) that around these blond hero-families there was a predominant element that was dark, for example Eurybates, the herald of Odysseus, was "stooping at the shoulders, dark-skinned and curly headed," in implied contrast with his lord.

Only once is a hero described as dark-haired, and that is on the occasion when Athena's divine magic destroyed and then restored the manly beauty of Odysseus, but whereas he was *xanthos* before the double change, he becomes "dark-skinned" after it, with "blue-black" beard,[77] like that of his divine enemy Poseidon, or the hair of Sappho, long after, which Alcaeus described as "violet-dark." Pindar later still

uses the same word of the Muses. A great literary artist may perhaps be excused for such a slip of memory as Sir Walter Scott made as to the appearance of JEANIE DEANS, and no other hero is described as dark-haired in Homer.

Another Homeric description of Odysseus[78] has caused controversy through insufficient attention. Here too it is Athena who rejuvenates Odysseus, making him "taller to view and sturdier, and down from his head she spread curly locks, like the hyacinth flower, and as when a man of skill overlays gold on silver. . . . and completes a work of beauty, so she showered beauty on his head and shoulders." That without exact knowledge of the color, or even the species, of the Greek "hyacinth flower"—which was in any case not our *Hyacinthus*, for it had conspicuous red spots like blood-drops on the petals—and ignoring the fact that even if it was our hyacinth, or any similar flower, the curled petals illustrate well the curly locks which are compared with it, learned persons should have written as if this passage proved Odysseus to be dark-haired, argues sad lack of acquaintance with goldsmith's work. To "overlay gold on silver" and thereby "shower beauty on his head and shoulders" expressly describes the same object and procedure as the combination of gold and ivory in the great fifth-century statues.

We shall have occasion later to discuss more fully Homeric allusions to fine metal work. Here it is enough to note that long before the twelfth century, in which the plot of the Odyssey is laid, the Minoan silver bowl, already noted (p. 73), had recorded several different complexions, and among them the silver face with golden hair which the Homeric description of Odysseus presumes. There were, then, people with fair or golden hair in the population of the later Bronze Age. Further evidence comes from ivory statuettes, one representing an acrobat, certainly from the "Later Palace" at Cnossus, and earlier therefore than its destruction about 1400 B.C.; the other of uncertain but

probably Cretan provenance, now in the Boston Museum, a masterpiece in this technique. The Cnossian acrobat has his hair represented by fine curled strands of copper or bronze inserted in a row of holes above the forehead. When these were new they were certainly not "blue black" like the beard of the rejuvenated Odysseus, but coppery, consequently intended for yellow or (at most) reddish hair. Moreover, they may have been gilded. Now, of course, they are corroded, and have stained the ivory around them with green. The "Lady of Boston" has similar holes on her head, and other scars where long tresses rested on her ivory shoulders. The metal curls have fallen out, but as there is no trace of verdigris, there is at all events no evidence that they were of bronze, and great probability that like the other metal trimmings of this figure they were of gold. In any case, they were intended, like those of the acrobat, to represent hair that was not darker than copper color. On the other hand, the glazed statuettes and frescoes, at Cnossus and elsewhere, represent almost invariably both men and women with black hair: only one fragment, from Mycenae and another from Orchomenus, show hair colored with ochre; just as there is one male figure painted white, from Tiryns.[79]

Evidence for Eye-Color and Complexion

To supplement the evidence of hair color, there is that for eyes and complexion; and this is fairly complete.[80]

Minoan painters regularly color the women white and the men a deep maroon or terra cotta. Their object clearly was to distinguish sunburnt open-air life from shaded domesticity: and some vase-painters of the seventh and sixth centuries revived this conventional color scheme, and (more commonly) coupled white women with men drawn in mere black silhouette like the rest of the design. Earlier schools, going back to the last days of Minoan decline, draw the

faces both of men and of women in outline, on a light ground; not to give the complexion, but so as to add the eye in paint, and distinguish flesh parts from hair and costume. The same device is commonly used for the faces of animals, and proves nothing about complexion.

In Greek literature two rival types of complexion are recognizable. Equally applicable to the sallow parchment-like Armenoid skin, and the clear often bloodless complexion of the Mediterranean brunet, are epithets *ôchros* (whence our word "ochre") and *chlôros* (whence the chemist's "chlorine") used also anciently of cream cheese, and unripe fruit and vegetables, such as apples and celery. In Homer, Odysseus' herald Eurybates was "swarthy," and Odysseus himself too, as we have seen, through a mistake of Athena, or the poet. Similar phrases for brunet complexion, such as "honey-colored," are not uncommon in classical Greek.

In Hellenic times, however, the true counterparts of the Minoan red-painted men are two. First we have the Homeric epithet *phoinix* meaning "blood-colored," used for tanned sailor-men and "redskin" Phoenician merchants from oversea, as well as for a bay horse, a red-haired man, and the date palm with its tawny-orange flower and fruit. Secondly, there is the Greek habit of making statues and even portraits in bronze,—not sickly green imitations of corroded antiques, as we see them in modern galleries, but well-groomed by the skilled statue-tender, as they stood in the sunlit portico of a Greek temple, with the color of a new penny, a perfect match for their sun-tanned models and makers. No one who has seen Greek sponge-fishers at work, or the little boys of Kalymnos infesting the whole luminous bay on a Sunday afternoon, questions that eloquent realism. Some day a museum will make that discovery too. The contrast however between the clean-limbed, wholesome, "red-skinned" islanders as they bring their laden vessel alongside at Piraeus, and the sallow hairy loafers on the continental

quay, is conspicuous; and it is, on the whole, the remoter islands which breed the more shapely as well as the clearer-skinned men.

But there is another series of words, applicable indeed in some degree to the clear suffusible skin,—which has often a high color, and moreover can blush charmingly (as ancient poets like modern travelers have discovered) as well as go dark when annoyed;—but even more appropriate to the fair complexions with which we are familiar in the north. Examples are "rosy face," "rosy skin," "rosy cheek," and also "rosy bosom," "rosy finger," "rosy arm," and "rosy ankle." On the well-known Alcmena vase the heroine has bright red cheeks,[81] and some of the painted tombstones show the same peculiarity.

In strong contrast with the "red-skin" Phoenicians is the "lily-white" skin of Homer's Achaean chiefs, which was much admired: for they are even described as of "radiant" or "dazzling" beauty. When Menelaus is wounded, he is compared with "ivory red-stained" (like our chessmen) by the skilled women of the Asia Minor coast.[82] Of his grandfather Pelops, who came as a stranger into western Greece, it was believed that he had an "ivory shoulder"; and a gruesome tale was invented quite early to account for it.[83]

The eyes are usually dark, among Alpine and among Mediterranean people alike, though brown eyes sometimes accompany chestnut-brown hair in some Alpine individuals. Both types however have occasionally gray or even blue eyes, and the frequency of these varies locally. If the gray eyes had any regular geographical distribution, among highlands, for example, or from east to west, we might infer some sort of selection by external circumstances, but the distribution does not indicate this. The alternative is to enquire whether any third racial element can be traced.

Now gray and blue eyes are normal among the blond "northern" peoples everywhere, and observation of a region

such as East Aberdeenshire where blond "northern" people have intruded among homogeneous brunet folk of "Mediterranean" origin shows that on the margin of the blond settlements the fair hair fades out more rapidly than the light eyes, which are numerous even where there is little other trace of the "northern" element such as sporadic red hair, the marginal distribution of which in East Aberdeenshire is instructive.[84] The same occurs all through the long Central European zone of contact and interpenetration between "northern" and "Alpine." Here "Mediterranean" blood is as completely absent as "Alpine" blood is from Aberdeenshire. The "northern" element can therefore be isolated as the sole disturbing factor in each case. With this clue, even so remote an instance as the gray eyes of the Khoumirs of northern Tunisia is explained by the invasion of this region by the Vandals from East-central Europe in the fourth century A.D.: in the lowlands they have been superseded by the Saracen invaders in the seventh century, but in the nearest defensible highland their presence is betrayed.

These gray and blue eyes are familiar in Greek literature, where three colors of the eye are distinguished; *melan*, *charopon*, and *glaukon*.[85] Of these, *melan* "black" explains itself. The word *glaukon* is used in the *Iliad* to describe the sea, the change of eye color when a lion is roused, and the normal color of the eyes of Athena; in later Greek, it describes the foliage of olive, willow, and "glaucous" poppy, the pale green beryl, and the "whitening" (*glaucoma*) of the eye by disease, as well as the tints of certain fishes, birds, and animal furs. Herodotus describes the Budini east of the river Don as a people "all strongly *glaukon* and red-haired." Among them was a settlement of runaway Greeks from Black Sea ports: so the association here of *glaukon* with red hair is instructive, since red hair is a frequent token of cross-breeding between fair and dark strains. *Glaukon* then certainly describes light-colored eyes, from gray to hazel.

The hero Glaucus in the *Iliad* was grandson of Bellerophon, an Æolid from North Greece. His grandmother was a Lycian, and of his mother we know nothing.

The third epithet, *charopon*, describes literally a joyous or "glad" eye; it was intermediate between *glaukon* and *melan* and therefore darker than *glaukon*, and it was also more intensely colored, for Theocritus makes a girl boast that her eyes are more of this hue "than those of gray-eyed Athena"; it was therefore not any kind of brown, and consequently included the tints from gray to blue. Two Homeric heroes, one Achaean, one Trojan, seem to have had their names from this peculiarity; and the son of one of them, Nireus, was the most beautiful man of all who went to the war.[86] In later Greek it is used for the eyes of Germans and monkeys, and in Latin the eyes of Germans were *caerulei*, a word used also of the sky, the sea, and certain flowers. The occurrence of gray and blue eyes among the Greeks in Homeric and classical times is therefore well attested; and occasionally statues of marble and bronze have their eyes inlaid with gray stone, or a gray glass-paste which may originally have been blue.

The Significance of Blond Types in Nearer East

In view of the early occurrence of Indo-European languages in western Asia, and of the fact that the Aryan invaders of India are described in their own early literature as blond, occasional traces of blond peoples in this region, at a far earlier period, are significant. In early Sumerian sanctuaries votive eyes have been found, made of gray marble, and also of lapis-lazuli.[87] In Egyptian representations of Syrian peoples, in the Eighteenth Dynasty, the Amurri folk are tall, of fair skin, with blue eyes, and brown hair; and there are still blond strains in the ancient home of the Persians, Farsistan, among the long-headed Kurds in the foothills of southern Armenia, and among the Druses

of the Lebanon.[88] No evidence as to complexion has been recovered as yet from Hatti countries, and the numerous Hatti portraits, by Egyptian and native artists, of various periods, show typical Armenoid profiles. The old Vannic population of the Armenian highland was of the same Armenoid type.

The significance of ancient evidence for a blond strain in the Greek people will be better appreciated in comparison with modern illustrations of the same peculiarity, of which the causes are more directly traceable. Among the modern Greek-speaking population, two quite distinct groups of comparatively blond people are easily recognizable, one on the west coast of Asia Minor, the other in the northeast of peninsular Greece; but as the source of each seems to be clear, and to be due to movements within historical times, it is only necessary to take account of them here, in so far as they illustrate the two distinct kinds of immigration, to which attention has already been directed in dealing with the racial types of this region (p. 53).

The peasant population on the west coast of Asia Minor, before the catastrophe of 1922, included a fairly common type with unusually light hair, fair rather than brown, usually straighter than that of the darker individuals, though occasionally curly like theirs. The moustache and beard are copious, stiff, and often sandy or reddish; the eyes are sometimes gray or hazel, sometimes distinctly blue and "glad" like the *charopon* type among the ancients. The complexion is fresh and clear, with rosy color in the cheeks; it tans to ruddy tints or to a warm brown, and is sometimes freckled. These people are thickset, not very tall, with round face, wide plump cheeks, and short chin. Their disposition is active, lively, humorous, though not very intelligent; they are trustworthy and hard-working, a fine type of peasantry, recalling a common peasant type in Belgium and the east of France. My own experience of

this type is limited to coast districts, and I do not know how widely it was distributed into the interior before the recent massacres. They may be descended from the ancient Greek settlers, but they are so different from the Greek townsfolk both of the mainland and the neighboring islands, that the alternative must be considered that they owe their physical characters rather to the Gaulish invaders who created Galatia in the third century B.C. in a region which moreover had been extensively occupied by another European people, the Phrygians, nearly a thousand years earlier.

The other blond type is that of the Rouman-speaking Vlachs, who have wandered all over Bulgaria, Macedonia, and northern Greece, since the collapse of the Roman frontier defense toward the steppe, but retain their "Roman" speech, in a variety of related dialects, the Latin origin of which is unmistakable. "We would describe the Vlachs" write the most recent students of them in Thessaly and the highlands to the northwest, "as a race of medium size, and slight build; with often a white skin and high complexion as compared with the olive tint of the Greeks. The hair is rarely black, usually dark brown and sometimes quite fair, especially in youth; and many of the children with fair hair, rosy cheeks, and blue eyes could pass unnoticed in northern Europe." A good Greek observer regards them as "neither of Hellenic nor of Albanian type, but more akin to Slavs." But "there is a great variety of types and the features vary extremely; in some faces they are clean-cut and refined, in others broad and heavy."[89] Clearly the Vlachs, of this region at all events, are themselves a mixed people, and include, besides Slav admixture, a considerable remnant of the population of the old Roman provinces beyond the Danube. Besides the Rouman-speaking Vlachs of today, it seems certain that "Greece herself has drawn into Hellenism large numbers of Vlachs, and that in Thessaly a large pro-

portion of the town population is of Vlach origin." No systematic measurements have been made, hitherto, but the long-headedness of Thessaly and all East-central Greece seems, as already noted, (p. 49) to agree in its distribution with that of Vlach settlements, past and present. In part at least it is probably due to Vlach admixture; but the Vlachs are not the first to traverse the permeable highland between the Danube and peninsular Greece. Its avenues and intermont basins have harbored Gauls, Thracians, and if we may trust Greek legend, Phrygians too. How far back in time, as well as geographically, we can trace this series of movements, it is for the archaeological evidence to show, in Chapters V and VII.

Ethnological Inferences from Olympian and Heroic Physique

We are now in a position to put the gold-and-ivory statues of Greek deities into a coherent ethnological setting, and also to interpret the traces of another long-headed breed in Greek lands, besides the old "brown race" of the Mediterranean. Olympian gods and goddesses—Zeus and Apollo, Hera and Athena, Demeter, Aphrodite, and the Graces—were fair, because whatever their antecedents, they were incorporated into the theology of a tribe or tribes of people who were predominantly fair-haired themselves. In only one of these instances have we precise folk-memory of the occasion of their installation in one of the principal centers of their worship. It was Eteocles son of Andreus, in the generation of 1330, who established the worship of the Graces at Orchomenus in central Greece. What wonder then that they were fair-haired, with cheeks "like milk and blood."[90]

Now the Graces are one of the best authenticated of those families or brotherhoods of coequal deities, who remained sufficiently coherent and intelligible to their local

worshipers, to resist incorporation in the Olympian scheme which eventually prevailed, and supplied the connecting link between the heterogeneous, ill-assorted, almost incompatible assemblage who gave Zeus so much trouble in Olympus, as we see that noisy quarrelsome ménage in the Homeric poems, intriguing, bullying, slapping one another. The Muses on Mount Helicon, only a short day's journey to the south are another such group as the Graces of Orchomenus; the "Moirai" are another, and we need hardly be reminded at this stage, that the Moirai are described as being "older than the gods." At Athens, even at the end of the sixth century, there was an "altar of the twelve gods" but we do not know who these "allied and associated powers" were; saving that Zeus, Athena, Apollo, and Demeter, at all events, had their separate sanctuaries in Athens, some of them already of old standing.

Of these older groups of deities, the Muses deserve particular attention, for while their worship and theology in Central Greece had been already accommodated to its departmental niche in a large artificial scheme, when we have our first glimpse of it in Hesiod's *Theogonia* or celestial peerage, folk-memory preserved the story of their northern origin. The Olympian Muses indeed were born on Olympus itself; but in Thrace, beyond the margin of the Greek-speaking world, there were Muses with very different functions and attributes, one of whom the tragedy of *Rhesus* represents as the mother of a hero-king; and this Rhesus has a historical aspect too, for in Homer he is son of Eioneus (a good Thracian name) and was killed at Troy, as the *Doloneia* describes.

In these and similar groups of coequal deities, less transformed by the need to incorporate local and alien personages, we have glimpses not only of the religious system of this or that tribe in Central Greece in early times, but of earlier phases in the history of the Olympian family itself. For the Olympian theology, like the Greek language, had passed

through a stage of experience quite different from that of the Aryan pantheon in India or that gathering of "all the gods" for whose festival the Hatti king was responsible.

In Vedic India, the greater gods retain, with their cosmical functions, their proper descriptive names, as the Sanskrit language has retained in unusual purity both its structure and its primitive vocabulary. In Greece, both language and theology have retained their structure, but have replenished, the one its vocabulary, the other its repertoire of deities, from local and alien cultures. In Asia Minor, the *Našili* language not only refurnished its vocabulary, but underwent serious disfigurement of its forms; and we have seen that, so far as our knowledge extends, the Hatti pantheon, if we may call it so, included the great mother-goddess of Asia, a sun-goddess, a lord of vine and grain, a storm and lightning god, as well as other nature-powers less precisely personified but characterized by symbolic attributes; it also recognized, if it did not embrace, Assyrian, Syrian, and Indo-European gods. But even this miscellaneous assemblage had its social order. As the Olympic gods sit grouped together in the Parthenon frieze to receive their votaries, so, on the sculptured rock-wall at Yasili-kaya, greater and lesser deities converge in processions, male and female; their leaders consenting by their gestures in concerted action, wherein some have seen a sacred marriage like that of Zeus and Hera at Samos. They co-operate also to sanction treaties, as do the grouped deities of Mitanni, Babylonia, and the Indo-Europeans, under their proper names. Later, but only when Greek observers have been before us, we find that in Phrygia the "Great Mother" of all nature is also "Mother of all the Gods," as in Olympic religion Father Zeus is "father of gods and men." Conversely, in the folk-memory of the Heroic Age, to which we must soon attend more carefully, Zeus is not the only "father of men." Both Poseidon and Ares begat "divine-born" kings; and Ares,

like the Muses, is a stranger in peninsular Greece, whereas he appears to be at home among the Thracians, and is a far closer parallel than Zeus to the war-god and storm-god Teshup among the Hatti-folk. He might indeed be described as the Thor of the Homeric Olympus. Poseidon, too, whatever his origin, never acquired either sonship to Zeus or an Olympian wife, or the golden hair of a true-born Olympian.

Summary of Conclusions as to Greek Deities and Hero-Cults

We have now dissected out of the complex religious beliefs of the classical Greeks, *first*, a multitude of old local nature-powers, closely akin to the objects of Minoan worship; *secondly*, local manifestations of worships resembling that of the "Great Mother" of Asia, likewise traceable back into Minoan times, and thinly disguised in the Hera, Demeter, Athena, Aphrodite, and Artemis of Olympus; *thirdly*, at least two non-Olympian father-gods, Ares and Poseidon, very loosely associated with the household of Father Zeus; *fourthly*, certain self-contained groups or confraternities of coequal deities, Graces, Muses, Moirai, only little modified in what was probably once tribal as well as regional seclusion. Of these, some one group was worshiped long enough in sight of Olympus, to become localized in the "Olympian homes" above its cloud cap; and then driven, by the political circumstances of its votaries, rather than by any theological expansiveness, to incorporate by clumsy expedients the chief gods of neighbors and vassals. That this had already occurred before the "Age of Heroes" seems to follow from the very intimate association of these Olympian gods, including even Ares and Poseidon, with those heroes (in the Homeric sense of the word) who were of almost as varied origin. Finally came the crisis which left all these objects of worship, old and new, confronted with a new class of cults, the worship of great men of the more or less recent

past; which is almost unknown to Homeric tradition, but ubiquitous, and profoundly influential, in the religious life of early Hellenic times, and in some instances demonstrably continuous with pre-Homeric worship at Mycenaean tombs. For indeed, in that crisis, old gods, of whatever origin and competence, had themselves been in the same need as their worshipers. Their authority had received a shock, from which it was never fully to recover; and so, while the Greek people, in the whirlwind moment of its birth, was outliving the gods to whom Homer "assigned their functions" descriptively, and whom Hesiod was trying to classify and explain, it was to the spirits of the great dead that men recurred for help. So too Saul in utmost need bade the Witch of Endor call up Samuel the prophet, at the moment when the national unity of the tribes of Israel, momentarily imperiled on Mount Gilboa, was in fact on the point of being consummated by the establishment of a new "House of God" in Jerusalem, "whither the tribes go up," the Delphi and Olympia of the Hebrews, as Sinai had been their Olympus.

With the contemporary references to Ægean peoples, and the glimpses of Ægean and other affairs, which we have from Egyptian and Hatti documents, it has been possible to follow back some aspects of ethnography, of linguistic history, and of the growth of a complex religious system, from the eleventh to the fourteenth century B.C. But both before and after that not very lucid interval, those documentary resources fail us. There remain, however, two other classes of evidence, more extensive and continuous. One of these is at all points contemporary, the evidence of material remains. And when we have reconstructed archaeologically the principal crises of cultural development in Greek lands, we may perhaps find means to ascertain the value of the second source of information, which is the Greeks' own folk-memory about the "Age of Heroes": that is to say, their pre-Dorian past.

CHAPTER V

COMMON CULTURE: EVIDENCE FROM PREHISTORIC ARCHAEOLOGY

We have now been confronted with several successive anomalies in the Ægean distribution of man. We have found an area, structurally a sunken part of the Mountain region, to be occupied only partly by Alpine or Armenoid breeds, and partly by Mediterranean from oversea, and this mixture we have traced back to the beginning of the Bronze Age. Traces of a distinct northern ingredient occur at Hissarlik, early in the Bronze Age, and we have seen from the distribution of blond elements in the modern population two main avenues by which such ingredients have been introduced in later times. From the distribution of Greek dialects, and languages related to Greek, we have detected similar movements in progress before Greek history begins, though the evidence of language alone has not permitted any but relative dates for them; still less, any but the most general conclusions as to the duration of particular phases. From the evidence of religious beliefs and rituals, we have found the spread of Greek and kindred languages to have been accompanied by that of a distinct outlook on external nature, and conception of its organization and guidance, namely the Olympian polytheism; and in Olympian polytheism the principal deities are large-built and blond. But here too the literary evidence does not justify more than a distinction between earlier and later: and it was only when we turned to the material works of art representing gods and men that we were able to fix relatively, and (as we shall presently see) also chronologically, the periods to which such

representations belong, without prejudice to the question whether the physical types so represented may not be shown to be both earlier, and also more persistent, than can at present be proved.

We have now to set all those kinds of evidence completely on one side, and enquire what may be inferred from the distribution and redistribution of this or that element in the material civilization. Here, as with actual human remains, we are dealing with the original objects, not with inferences from the distribution of survivals or transcripts, as with languages or institutions, nor of traditions, as with religious beliefs. Whereas the student of men's ways of *doing* things has first to discover somehow, by these indirect clues, what it was that was *done*, before he can discuss its significance, the archaeologist, who studies men's ways of *making* things in the past, as the technologist does in the present, has at all events no doubt as to what it was that was *made*, in any department of skill that comes under his notice at all. Each recovered object of stone or pottery or metal work is an original piece of craftsmanship fashioned by such and such an individual, at this or that time, usually also in this or that place, from materials the local source of which may be ascertained. Moreover it was made to satisfy a particular need, popularly felt, in a way popularly accepted as adequate, and consequently gives direct information as to a particular stage in the struggle to "live well" under particular regional conditions.

Further, the more certain we are that such originals have been discarded as worthless—broken pottery is the commonest and most typical example—the more accurate is the information which they transmit as to the place and time at which they thus passed out of use; and consequently it is in the successive layers of a rubbish heap or of a building site devastated and reoccupied, that we have the most indisputable as well as copious evidence of the sequence of styles,

that is to say, of the transitory ways of doing the daily round of life and making things to subserve this end. For each successive stage of Greek pot-making, that is, we have in thousands the finger prints of the potters themselves on the same clay that they were moulding: what would not a philologist give, to watch contemporary lips pronounce once only the Greek sounds of *a* and *e*, first of the fifth century, and then of the fifteenth? Finally it is from the comparison

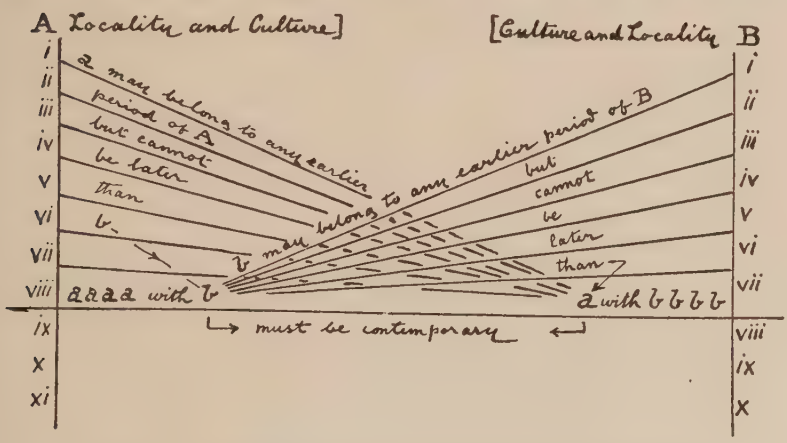


Fig. 8.—Diagram to Illustrate the Logic of Date-marks

of such stratified deposits, or from a group of objects assembled for a momentary purpose, such as the furniture of a grave, and deliberately set aside together (as was hoped) forever, that we are justified in concluding that this and that group were contemporary; and are enabled by comparison of such "date-marks" eventually to correlate the relative antiquity of otherwise prehistoric material with the absolute chronology of Egypt or Babylonia, and so with the political history.

The logic of this argument from "date-marks" is as simple as it is conclusive (fig. 8). If an object belonging to a given phase (a) of one culture (A) be found among dis-

carded products (bbb) of a given phase of another culture (B), the object (a) cannot be later than those products (bbb), though it may of course happen to be of earlier date. If however, also, even a single object of class (b) is found similarly associated with objects (aaa) of culture (A), though it might in default of other evidence be earlier, it cannot under the circumstances be later. But as (a) is not later than (bbb), and (b) is not later than (aaa), the possibility that either (a) or (b) is earlier than its associates is also excluded, and therefore not only (a) and (b), but the whole phases of culture (aaa) and (bbb) are neither earlier nor later than each other, and therefore are contemporary.

It is only because arguments from "potsherds," and the like, are still occasionally treated by some persons with a levity commensurate with their inexperience, that it is desirable to digress for a moment to state what archaeological method is, and the kind and validity of the conclusions to which its reasoning leads. It is in all respects identical with that of the other stratigraphical sciences, though it must be admitted that it shares with geology the disability that access to its proper materials is restricted, partly by the decay and disappearance of important kinds of material, partly by accidental and quite irrelevant obstacles to the study of any materials at all; chiefly by the obstruction of this or that portion of the earth's surface by other kinds of human enterprise. An antiquary may no more excavate freely in Turkey than a geologist may cut sections in enemy trenches or under Saint Paul's, or use hammer on stone in a powder magazine.

The Later Stone Age in the Ægean

At present the only coherent series of material illustrating the Ægean Stone Age comes from the stratified deposit of village débris, from twenty to twenty-five feet deep, which underlies the "palace" buildings at Cnossus.[1] Even this long

series begins with material arts, pot-making, implement-grinding, and adobe-building, which are far from primitive. Crete therefore was discovered and occupied by people from elsewhere, at a time which cannot be fixed precisely, but cannot be less than many hundreds of years, and was probably some thousands, before this neolithic community and its culture were superseded by those of the Minoan Bronze Age. Of that transition, and consequently of the total duration of the Cretan Stone Age, the evidence has been destroyed; for the top of the old mound was removed when the site was leveled for the construction of the first "palace" about eighteen hundred years B.C. For the latter end of this period, then, and also for supplementary information about its earlier phases, we have only the scanty material from a few other Cretan sites, including one or two caves; from the lower layers under the late "palace" at Tiryns; from a much ravaged deposit on the south side of the Acropolis of Athens; and from village-mounds in Central Greece, Thessaly, and Macedonia.[2] Even the "first city" in the stratified mound of Hissarlik, the traditional site of Troy, only goes back into the transitional period when copper was already in use. In the Cycladic islands, and at Korakou on the isthmus of Corinth, nothing has been found hitherto of purely neolithic culture.[3]

The stone implements of neolithic Cnossus do not present any peculiarities to distinguish them from the numerous plump oval adzes, ground out of a natural pebble of hard rock to a blunt cutting-edge at one end, which are found on adjacent mainlands. And there is at present no sufficient series of such implements from the Nile valley, still less from other parts of North Africa, to justify comparisons between African types and those which have been found in considerable numbers in Asia Minor and in peninsular Greece. The long, rather acutely conical butt end, characteristic of West Mediterranean implements is, however, inconspicuous in the Ægean, if not absent.

The pottery is rather more instructive. In the neolithic culture which immediately precedes that of pre-dynastic Egypt—not to mention the more primitive "Badarian" culture which is considerably older—the art of pot-making was already ancient and well developed, at all events in the oldest settlements and graves which have not yet been overlaid by marginal spread of the Nile mud over the valley floor. But whereas the pottery of these settlements employs chiefly either simple "mud-pie" forms, or imitates stone vessels, or very rarely vessels of skin or gourd, there is one fabric so completely distinct, introduced so abruptly, and fading out also so soon and rapidly, that it is easily recognized as intrusive; and as it has no counterpart either in Palestine, or Arabia, or Up-Nile, it must have come into Egypt from the west. It is of coarse black or merely dark earth-colored clay, of simple open forms, bowls and wide cups, and is carefully decorated with close-set basketry designs, incised deeply and enhanced with white clay filling.[5]

Now all through the grassland margin of the Sahara, pottery even today plays a very small and subsidiary part in domestic economy, compared with ubiquitous, simple, but very skilful basketry, usually made from the perennial "esparto grass," a tough flexible rush which covers very wide areas, and is exported in large quantities now to the paper mills of western Europe.[6] North Africa itself is still so ill-explored, and pottery of any kind has such local vogue there, that it is not yet possible to demonstrate the Libyan origin of the pre-dynastic basket-pots[7] though the modern Kabyle pottery clearly betrays in its panel decoration its dependence on such a prototype; but in Spain, where esparto flourishes as in Africa, there are numerous neolithic fabrics of pottery showing the same close observance of esparto basketry both in forms and in their incised decoration.[8] One of the latest, and by far the most important of these forms is the graceful "bell-beaker," which had an

immense vogue in the period of transition to the use of bronze, and is to be found from Portugal to Hungary and from Sicily to Britain.[9] Similar fabrics, varying in detail from one district to another, occur in Sardinia, Sicily, South Italy, and Malta in the later Stone Age;[10] in caves of the same age in the Lebanon;[11] in Crete in the neolithic settlement at Cnossus.[12] In Crete elaborate basketry decoration is not common; but in the earliest Bronze-Age tombs and settlements of the Cyclades, the same grass-woven tradition is passing already into special local forms. This suggests that their makers had not had long to accommodate themselves to Cycladic circumstances; a fact with which we are already familiar from the history of their physical breed (pp. 43 ff.). But in Crete this neolithic pottery, and the culture which accompanies it, go back through the long period represented by some twenty or twenty-five feet of stratified village débris.[13] There is therefore ample evidence for the derivation of essential elements in the civilization both of Crete and the Cyclades from the same oversea source as we have had to infer for the important "Mediterranean" element in their population; though the Cyclades seem to have been reached by a distinct and later exploitation.

How then, and when, did the people of "Mediterranean," that is to say of originally North African descent, make good their footing on the islands and coasts of the Ægean? Telemachus in the *Odyssey*[14] enquires jestingly of the stranger who arrives at his island home in Ithaca, "where is your ship, for I do not think you could have come by land?" And the same question must be asked of these other aliens, before we go farther. Fortunately the answer is clear. Representations of boats are fairly common on one of the earliest fabrics of pottery in the Cyclades; not only small boats, propelled by a single man, but large vessels with a long line of oars, though the artist may have exaggerated

the number of them. These vessels have long low hulls, with a sharp spur astern. The prow rises high and oblique, and usually carries an ensign representing a fish, a bird, or other emblem. This is of some importance, as it shows that it was necessary to distinguish vessels from one another, at sea, or on arrival at a foreign port.[15] There was therefore habitual traffic between independent communities. Similar ensigns are carried on the Egyptian ships represented on pottery of the pre-dynastic age, and some of these Egyptian emblems are recognized as the badges of provinces and communities the situation of which is known, because they figure animals or other objects which were principal symbols of worship there in historic times.[16] The date of the Cycladic ships cannot yet be determined accurately, but they are certainly earlier than the first traces of Cretan influence among the islands, and this influence begins to be perceptible about the time of the Sixth Dynasty in Egypt, that is to say, not later than 2800 B.C. and perhaps earlier.

In Crete similar evidence comes from representations of ships on engraved seal-stones of Early Minoan style and date, not later than the Fourth Dynasty in Egypt. Some of these ships have a mast with stays, and a yard with a sail; they carry at the masthead a crescent or a ball as ensign. Some have also numerous oars, and are of considerable size. Their hulls differ from the Cycladic vessels, and have a convex keel, rising high at bow and stern alike, in this respect showing closer resemblance than the Cycladic ships to the pre-dynastic Egyptian, the only other known type of vessel of as early date as these.

There is no doubt then that it was possible to cross a considerable width of water in the Ægean quite early in the Bronze Age. It is also certain that though in pre-dynastic Egypt most of the boats depicted on the pottery and represented rarely by clay models were house-boats designed primarily for river traffic, there were others, larger and more heavily built, which were competent to make sea voyages.

Moreover, as Egypt was already practically devoid of native timber in the pre-dynastic age, the very existence of these large vessels presumes acquaintance with a timber-producing region, and some command of its resources. Such timber countries existed then on either side of the Nile delta. Northeastward there is the Lebanon region of Syria, where the forested frontage falls steeply to water level, the winter torrents are large enough to sweep fallen trees down to the sea without human aid, and the summer wind blows steadily and obliquely to the coast, so that a mere timber raft can be piloted alongshore without serious risk except from stranding on the low shelving coast between Carmel and the Nile mouth. The return journey can be made either by the coast route overland, or by taking advantage of the main sea current of the Mediterranean, which flows counter-clockwise, and consequently northward from the Nile to Syria. This great source of timber was known to the Egyptians at least from the Third Dynasty, and perhaps earlier.

But there was also an alternative source of timber westward, along what is now the treeless Libyan shore of North Africa. As late as the sixth century Herodotus describes the "Hill of the Graces," in the modern region of Tripoli, as "thick with forests."[17] Even now, though the country has become much drier than in classical times, there is high scrub with occasional trees, as well as considerable olive culture on the edge of the plateau inland of Lebda (*Leptis Magna*), and in earlier times there can be little doubt that this wooded area was considerably larger, and nearer the coast. From this region the sea current flows toward and past the mouths of the Nile. In summer the seasonal wind is on-shore, and where the coast is low there is dangerous surf, but the modern sponge-fishers keep the sea here for long periods, in small sailing vessels. There was therefore no difficulty in bringing timber, or ready-made vessels, to the Nile mouths from the west.

It must further be noted here, that whatever may have been happening in the eastern Mediterranean, the western basin had been traversed by skilful navigators already in the later Stone Age. This is proved by the occupation not only of Malta and the Balearic Islands, but even of distant Corsica and Sardinia by the builders of various kinds of stone monuments and of the settlements and tombs associated with them. As all this phase of seafaring preceded the first introduction of copper working, and as the earliest types of copper implements in the west are borrowed from the copper-working province which includes pre-dynastic Egypt, there is no doubt as to its very early date; and we have already learned from the pot fabrics that there was some community of culture between the shores of the West Mediterranean and several coast districts of the eastern basin.

What evidence, however, is there for intercourse between the Libyan and the Ægean shores of that sea, as well as between the Nile-folk and their neighbors: In the first place, the main sea current, after passing the coast of the Lebanon, sweeps round along the south coast of Asia Minor, and past Rhodes to the south side of Crete, and thence up the west coast of Greece and on past Sicily and Malta, as is vividly illustrated by the voyage and shipwreck of Saint Paul.[19] Secondly, from the Lebanon onward, the coasts are for the most part high, and the daily alternation of land and sea breezes is a sure aid to the coaster in either direction. The Egyptians discovered very early what they described as the "great circuit" or bend of the coast from Syria to Cilicia, and had frequent intercourse with it, all the more easily because the steady north winds of summer gave security of return from any point on this outward course, to an African shore, and thence with current and shore breeze back to the Nile. It was indeed a "great circuit of the sea," not a mere bend of the coast as has been supposed:

and the Roman *orbis terrarum* was only a westward extension of it. And the farther west a ship went beyond the Cilician gulf, the more certain it was to make African land west rather than east of the Delta, and so avoid featureless country: best of all was it to go full circuit and make the southward turn where the distance from Crete to Cyrene was shortest, and the high profile of the Cyrenaic plateau gave sure landfall and ample warning to veer into the homeward current.

Other Proofs of Early Intercourse between Ægean, Libya, and Egypt

Thus it was not the Nile-folk only, but all the coast people of Libya, who were in the position to make this grand tour of the "very green sea," as the Egyptians called it. Hence widespread and very early uniformity of culture, along these coasts, in several important respects.

Rather later in date, in respect of archaeological evidence for it, but quite distinct from any symptoms of intercourse between Crete and Egypt, however early, is the appearance in Crete of a type of stone-building which does not occur in Egypt, but is on the other hand widespread and very ancient both in North Africa and on other coasts of the western Mediterranean. This is the corbeled or "false-vaulted" construction of the so-called "beehive" tombs. In Early Minoan Crete the primary graveyards with their separate interments close below the surface were economized and re-used as soon as the bodies were decayed; and the bones, and any remains of the tomb furniture that were recovered with them, were transferred to permanent charnel-houses, constructed underground, lined with stone walling, and roofed with a beehive-shaped corbel-vault narrowing to a single flat stone at the top.[20] In the island of Syros, some of the primary graves, when they were constructed on a hill-slope, were roughly corbel-roofed, and provided with a

doorway in the downhill side; and it is likely, from the abundance of their contents, that they were used for several burials, like a family vault. This kind of construction is without early parallel either in southeastern Europe where surface graves remained undisturbed by reinterment, or in Asia Minor where cave burials or excavated chamber-tombs were customary at all periods, though in the Ægean itself it developed later into the magnificent "treasury" tombs of Mycenae and Orchomenus, and the chambered tumuli of the Carian coast. It is found however in North Africa, ancient and modern, and comes to high perfection in the great sanctuaries of neolithic Malta and Gozo and in the "giants' graves" of Sardinia. Through these local and insular developments this vaulted form is affiliated to the long earlier series of "passage graves" and other stone-built monuments ruder and earlier still in Spain and Portugal, and their counterparts of various periods and types along the Atlantic coasts as far as the "dolmens" of Sweden, and the great cupola-tomb of New Grange in Ireland. It is still in use for farm buildings in South Italy, and for dairies and cheese stores by the shepherds of Mount Ida in Crete.[21]

The more special connections between the pre-dynastic culture of Egypt and that of Crete, which have been discovered and recently analyzed by Sir Arthur Evans,[22] valuable as they are as the first phases of an intercourse which came to be of the greatest importance later, do not go back very far in the long neolithic series at Cnossus; still less in the Cyclades can they be shown to go back to the beginning even of the Bronze-Age culture. They mark rather a fresh stage by revealing the growth of intercommunication between the South Ægean and a particular African region, the Nile valley, which was the home of a special and precocious culture. Examples are the use of green malachite for face paint, an alternative to rouge which must be seen on a clear brown complexion to be appreciated as it deserves; the

simple wooden bow, and the chisel-edged arrow for bringing down birds and "small deer"; the flexible ox-hide shield, for hunting big game as well as for war; the fine craftsmanship and characteristic forms of the vessels in hard stone; the peculiar vessels of copper with no neck or rim, but a trough-spout inserted in the shoulder. Common also to the early men of Egypt, Libya, and Crete,—or at all events associated in Egypt with other Libyan connections,—are the lock of hair left long on one side of the head, the narrow pointed beard, and the peculiar loin cloth and protective belt; common likewise to the women, the costumes variously elaborated from a blanket-like wrapper, open down the front from the neck, and folded over itself round the waist, quite different, therefore, from the apron-shawl of primitive Babylonia.

Some other similarities are less instructive because they are not limited to the eastern Mediterranean. For example, mace-heads with drilled perforation are common to neolithic Egypt and neolithic Crete. But they occur also in early Bronze-Age tombs in Cyprus, which has only a secondary, later, and otherwise quite different contact with Egyptian culture; they occur on early Sumerian sites; in neolithic Susa, and at Anau in Transcaspia; in the "second city" at Hissarlik, and in the far off "ochre graves" of South Russia. There is therefore nothing specifically Egyptian in the Cretan use of this very important invention, any more than there is proof, as yet, that the use of the drill itself originated in Egypt rather than in some part of the large drill-using region of western Asia.[23]

Similarly, neolithic Cnossus had objects made of the *Tridacna* shell, a mollusk of the Indian Ocean; but unless it can be shown that the Sumerians had not yet established intercourse with those waters at this early period, there is no proof that *Tridacna* shell came to Crete (as also to neolithic Italy) by way of Egypt rather than through Asia Minor.[24]

Early Female Figures: Their Distribution and Significance

Quite ambiguous in its affinities at first sight, but also most important in view of its later distribution, if it can be assigned definitely to either group of influences, is the symbolic or magical significance of a type of female figure, nude, often grossly corpulent and otherwise exaggerated in detail, sometimes represented sitting (or rather squatting, with one foot under the body) sometimes at full length, but rather recumbent than erect. The arms are sometimes extended beside the hips, sometimes they are folded across the body, or support the breasts.

These figures occur in the later neolithic layers at Cnossus, in clay, in various kinds of stone, and especially in a white marble indistinguishable from one of the Cycladic varieties. In the earliest Bronze-Age graves of the Cyclades,[25] containing pottery of "basketry" fabric, they are common, and develop into large-scale workmanship, and subsidiary types carrying a vase or playing a double flute or a three-sided lyre. One has a smaller figure perched on its head; there are rarely male figures in this style, and there is one sheep or goat, hollowed to serve as a vessel. In the Cyclades the same technique and material are employed for vessels of the same "basketry" forms as the pots which are buried with them. As has been noted already, Cycladic figures of this kind seem to have been transported to Crete; there is one, in Cycladic marble, from Laconia, and one from Athens in the local Pentelic marble, and unusually corpulent. East of the Ægean, there is a local fabric of them from early village-mounds in the interior of Lycia,[26] full-length figures in marble, (with a stray example from the "third city" at Hissarlik) and squatting figures in polished brown clay, represented clothed, with hats or wreaths on their heads,

and incised details. From Adalia, farther east, there is one squatting figure in a very early fabric of black clay, polished and incised, with white filling.[27] There is one very rough-hewn example in stone from Phrygia in the far interior. Hissarlik has a long series of local forms, in the early black-polished clay from the "first city," in red-polished clay and white stone from the "second" and subsequent towns; with a single figure of lead, cast in a mould, and with unusually precise detail connecting it with the Babylonian type to be described later.[28] From Lydia, farther south, comes a stone mould for casting similar figures.[29] In southeast Europe, there are seated figures in clay, very like the Cycladic (and like them tattooed), from neolithic graves near Rustchuk on the Lower Danube, from neolithic Vinča and other Serbian sites along the Danube and lower Morawa, from the settlements of the "painted-ware" culture in Roumania and Ukraine, and from "painted-ware" settlements in Thessaly. Sir Arthur Evans has collected other examples even farther afield, as far as Lake Ladoga in northwestern Russia; and has suggested that ultimately the origin of this whole class of object is to be traced to the corpulent female figures from the late palaeolithic sites of western and west-central Europe.[30]

Less remote analogies are to be found in two other directions. Exceptionally corpulent women, sometimes clothed however in a full skirt, are common in the great sanctuary structures of neolithic Malta, together with conical stone objects rudely representing a single breast, probably an abbreviated symbol of similar meaning. Female figures of a different style come also from a cave near Palermo.[31] This group is important as showing that this symbolism had deep hold in a principal center of the early culture of the West Mediterranean, with which, as we have seen, primitive Crete shares its pot-technique and its corbel-vaulted tomb architecture. On the other hand, a special type from

Hissarlik and Lydia points eastward to Syria and Babylonia, where the fully symbolized figure of the goddess Ishtar, quite nude except for rich necklaces and earrings, and holding both breasts with her hands, was conventionalized in North Syria and thence first introduced into Babylonia at the time of Hammurabi's conquest, about 2100 B.C.[32] Similar figures of the mature Ishtar type have been found on several early sites in Syria and Palestine, from this period onward. Some may even be earlier, but this is not certain. Predynastic Egypt has occasional clay figures of corpulent women, not conventionalized, however, but studied from life, and quite distinct in technique and style from any of the Asiatic types.[33]

Finally, in graves of the Early Bronze Age in Cyprus, very primitive female figures, clothed and bejeweled, and sometimes in pairs, are executed in red clay, polished and incised, but in a flat clumsy style which looks as if it imitated figures carved from a plank of wood.[34] Only at a much later stage, and after these flat figures had long gone out of fashion, do clay figures of the symbolic Ishtar type, of grossly exaggerated ugliness, come gradually into use, but not until intercourse with the adjacent coast of Syria is demonstrable from other borrowings, and probably not much before 1500 B.C.[35]

In the light of this evidence from Cyprus, we are now able to distinguish two distinct usages, and two stages of symbolism. Primitive female figures, even if nude and exaggerated in their execution, are not necessarily derived, as has been commonly supposed, from the conventionalized Ishtar type which was developed in North Syria and transmitted in Hammurabi's time to Babylonia. For the Ishtar type, though widespread in Palestine, did not reach even Cyprus till considerably later. That the Ishtar type spread also northwestward is shown by the examples from Hissarlik

and Lydia; but its influence is only perceptible in the gesture of one small class of the Cycladic figures, and not at all in the Cretan, or any of the European types.

On the other hand, in Cyprus at all events there was a custom of putting into the tombs figures of women, in ordinary attire, and these had already become highly conventionalized,—perhaps even had lost their meaning—before they were first copied in clay; and this was certainly not later than the Twelfth Dynasty of Egypt, for the earliest beads of Cyprus, which are of that period and style, do not occur in the tombs with the flat figurines, though they came into use soon after. Similarly in Malta, a quite different sort of convention had already fixed the type of the female figures there, before they were translated from more perishable material into stone or clay. But there is no evidence that in Malta these figures had any other use than as votive symbols in a sanctuary; they represented therefore their dedicators, not any goddess; they were sometimes in ordinary attire, and they could be replaced by a single breast, sufficient to express their meaning. There is therefore nothing to connect the Maltese figures with those of Cyprus or the Cyclades, which are funerary, not votive, except that these also are shown by their music-playing variants not to be divine personages but human escort for the deceased, of a familiar sort, replacing actual human beings, such as were buried with distinguished persons in many regions, for example in early Egypt and in Bronze-Age Sicily.[36] The female figures of neolithic Egypt fall clearly into the same category as the more elaborate escorts in Twelfth Dynasty tombs. It only remains now an open question, whether the Cycladic figures are to be connected with the Egyptian custom, and if so, whether the custom of Cyprus is also to be connected with the Egyptian; or whether both Cyprus and the Cyclades, which were in any case not yet in direct communication with each other, both obtained this custom from

a common center of culture in Asia Minor. It would seem that this question must be left open for the moment; but the next class of evidence to be considered will be found to bear indirectly on it.

Pottery Fabrics of the Early Bronze Age

At Cnossus, as has been noted already, there is a break in the stratification between the end of the neolithic and the beginning of the Bronze Age, due to the removal of the top of the mound by the Middle Minoan "palace builders." In the Cyclades the course of events is clearer. Here, though no purely neolithic sites or tombs have been found as yet, the earliest tombs, best illustrated in the Pelos cemetery in Melos, though they belong to a period when copper, and probably also bronze, was already in use, contain pottery which is wholly modeled on vessels of basketry and wood: their clay moreover is unrefined, earthy, and without artificial coloring, usually therefore of dull brown tints.[37] It has no handles, even of the rudimentary sort which occurs in the later layers at Cnossus, but only a few knobs of clay perforated to carry suspension cords. Though its forms are composite and not ungraceful, there is nothing to differentiate it from other fabrics of the widespread Mediterranean tradition already described.

These earliest tombs, fairly common in the islands, are clearly distinguished from another series, well illustrated in Amorgos, in which the pottery is of a quite different tradition, with smooth globular forms, without distinct standing-base but with fully developed handles; in particular there are jugs with trough-shaped lip for pouring liquids.[38] The clay, itself still usually dark and earthy, shows an attempt to produce a red color by stronger firing, though this is often disfigured by darker stains. Sometimes a wash or "slip" of brighter red clay has been applied to improve the surface, and the whole pot, after firing, has been burnished with a pebble or other hard smooth implement. On this polished surface

there is little or no incised ornament, but occasionally small pellets of clay are applied, to enhance the lively aspect of the beaked neck by the addition of eyes or breasts. That this fabric of pottery is later than that of the Pelòs tombs, and gradually superseded it, is proved by the stratified settlement site at Phylakopi in Melos, where Pelòs ware predominates in the lowest layer, and gives place gradually to the "red-polished" ware, with a whole series of intermediates, decorated with various incised ornaments, chiefly derived from the old basket patterns, but now presented separately on the free field offered by the polished surface of the vessel; and including also representations of animals, the boats already mentioned, and human figures.

This is a type of artistic development in an imitative style from the "skeuomorphic" to "substantive" decoration—from "enhancement," that is, to "ornament" in the strict sense of that word,—which we shall find to be frequently the symptom of a fresh relation between the craftsman and his work, and usually the reaction to a fresh material or means of expression. Here, the novelty was the smooth "red-polished" surface, which needed no enhancement and originally received none, but challenged a potter accustomed to enhance his rude handiwork by assimilating it to basketry or woodwork, to experiments in incised design which could be made without destroying the new red-polished finish, and also without strict reference to the shape or purpose of the vessel. A more familiar example is the result, in renaissance ceramic, of the introduction of Saracenic and other oriental glazes among craftsmen already accustomed to decorate woodwork and glass pictorially and now enabled to decorate their pottery also in this way.

Whence came this "red-polished" technique, with its smooth globular forms, beaked spouts, and appreciation of smooth self-colored surfaces? At Hissarlik, similar forms are characteristic of the finer pottery of the "first city," but they

are less mature, and some of them are clearly modeled on vessels of skin, for they stand not on a flattened base, but on three or four short legs. They are executed moreover not in the "red-polished" technique, but in a clay which has been artificially blackened; originally perhaps by smoky firing, though usually such accidental blackening has been enhanced or even produced by mixing with the clay some oil or vegetable juice which became carbonized in the fire, and also made the pot easier to polish. Similar "black-polished" pottery is found in early burials in the interior of northwest Asia Minor, and sporadically near Adalia and other districts farther southeast. The forms are sometimes "askoid" or skin-modeled, sometimes globular with long trough-spouts. Westward from Hissarlik also there are more primitively shaped pots in similar technique, all through Thrace, Macedonia, and peninsular Greece; and the same tradition influences also the pottery of neolithic Serbia as far as the stratified mound at Vinča on the Danube.[39]

But this is an early and immature phase; in particular, the pots are blackened, when they are deliberately colored at all. In the "second city" at Hissarlik, on the other hand, there is already an attempt to make "red-polished" pottery, and this technique presumes greater control of the firing, and especially avoidance of smoke stain, which is not easy without some provision for separating the pots and the fuel; that is to say, without a rudimentary oven or kiln. The pot forms of the "second city" are also less commonly "askoid" and usually imitate the spherical or pear-shaped gourds which grow wild in moist places, all over the Near East, and are still commonly cultivated, like pumpkins and African calabashes, for use as cups, jugs, and bottles. For they may be moulded during growth to more convenient shapes, and provided with the characteristic trough-spout by cutting obliquely the end nearest the stalk. Though the hard smooth rind has a perfect natural polish of its own, it is easily

scratched, and consequently may be decorated with linear ornament. But such ornament stands in no natural relation to the form or utility of the vessel, and therefore is not skeuomorphic but purely representative of whatever the craftsman has in mind.

Now this "red-polished" pottery, with its characteristic "gourd" forms, is widely distributed in the Asiatic section of the Mountain-zone, in association with very early types of copper implements, flat celt, leaf-shaped dagger, spiral-headed pin. Though it is only at Hissarlik and in Cyprus that this culture has been studied in detail, the "red ware" has been found in Phrygia, Cappadocia, Lycia, Cilicia, North Syria, South Palestine. Other red-polished fabrics occur in adjacent areas to the southeast and east, in pre-dynastic Egypt, in Babylonia (though not in the earliest layers), at Anau on the foothills of North Persia (here, too, intrusive into an older, quite different culture); but these fabrics have quite different vase forms, and their connection with the "gourd-type" ware is obscure. Beyond Hissarlik westward, the "red ware" rapidly fades out, but the "cut-away" neck is common among the pottery of Macedonia and Thessaly and remains characteristic of this North Ægean region until the Early Iron Age. In southern Greece, as we shall see, the "cut-away" neck reappears; but until we know when the quite alien culture of neolithic Thessaly was established there, it is not possible to distinguish between vase forms propagated from the north, overland, and other "gourd-types" which were introduced here by sea from the Cyclades (p. 244). Even in Serbia and beyond the Danube there are occasional local attempts to make a "red ware," but they are discontinuous, and also of uncertain date, and their vase forms are not obviously related to those of the "gourd type." All through the first neolithic culture of the Upper Danube, however, the forms of the pottery are simple derivatives from a "gourd type," and their incised

decoration is not skeuomorphic, but consists of a band of substantive designs, zigzags, wavy lines, or spirals, running continuously round the vessel, clear of both rim and underside. Hence the German nickname of "band-keramik" for this whole class of pot fabrics, which however fails to express the "free-field" composition, and the "representative" quality of this style of ornament. But if, as seems likely, the Danubian fabrics owe their original inspiration to the use of actual gourds, either the climate of the Danube valley must have been considerably warmer than now (which is unlikely) or else this habit of imitation must have spread from far to the southeast, and in a more elementary phase than is represented at Hissarlik or in Cyprus.[40]

In both these instances, the "red-polished" ware begins with simple forms, and almost complete absence of incised ornament. Later, in Cyprus, the forms become varied and elaborate, much linear ornament is incised all over the surface, and filled with white, and the quality of the "red-polished" surface degenerates. The linear ornaments are usually derived from the repertory of basketry, but they are frequently dissociated and employed as substantive designs, chevrons, zigzags, triangles, lozenges—in the way already described—on the free field of the vase surface. After a long purely "red-ware" period, painted pottery comes in about the time of the Twelfth Dynasty of Egypt, with fresh types of copper implements and blue-glazed beads of Egyptian fashion.

At Hissarlik the simple and rather heavy forms of the "second city" become varied and more graceful in the "third," "fourth," and "fifth," and then degenerate in competition with fresh fabrics of which there will be something to say later. Incised ornament is never common or elaborate; instead, the rotund bodies themselves and the peculiar upstanding handles of the bilateral pots remotely suggested human form and were enhanced with breasts, eyes, and noses

modeled in relief. Often the face is on a bell-shaped lid; and similar "face-urns" have a wide though discontinuous distribution far into Central Europe.

In the Cyclades, the fabric and forms of the first "red ware" are sufficiently like those of Hissarlik and also sufficiently remote from those of Cyprus, to make it certain that this fabric was introduced from the west coast of Asia Minor, not from Cyprus by sea. And this conclusion is confirmed by the fact that among early Cycladic implements of copper and bronze only those types are common to Cyprus and the Cyclades which are common also to Hissarlik and the Danubian region; whereas other types, common to Cyprus, Hissarlik, and the Danube, never reached the Cyclades; and there are types common to Hissarlik and the Cyclades which do not occur in Cyprus.

Both in its pot forms and in its implement types, however, the Cycladic culture shows, from the first, a notable originality, freedom of experiment, and command of materials; especially after the introduction of painting, which we shall have to discuss separately later.

In the Early Bronze Age of Crete, there is less evidence of this Asiatic influence, and much of what there is comes in, not directly, but through the Cyclades. There is, indeed, one local fabric of "red ware" at Vasiliki in the east of the island: it began as a clumsy imitation, defaced by smoke stains, though it retrieved itself by arranging that these stains should form a rough mottled decoration; its forms are not Cycladic, and it has an exaggerated "swan's neck" treatment of the trough-spout, which occurs in the interior of Asia Minor, though not in the Cyclades. Apart from this, "red ware" hardly occurs in early Crete; its place is taken by dark-colored wares, at first due to the use of clays containing organic matter, but later less to deliberate addition of oil or juice, than to the use of a black "slip" or paint—

eventually of fine glazing quality. On these dark surfaces, ornaments derived from the neolithic repertory were first incised and emphasized with white filling, subsequently imitated in white paint and greatly elaborated, and then supplemented in Middle Minoan times with other colors, yellows, reds, and purples. The forms, though reminiscent of their gourd prototypes, are never so freely handled as in the Cyclades, and the early introduction of the potter's wheel in Crete cramped the free-hand modeling of the vessels and limited the repertory to a few standard forms, as such mechanical devices always do.[41]

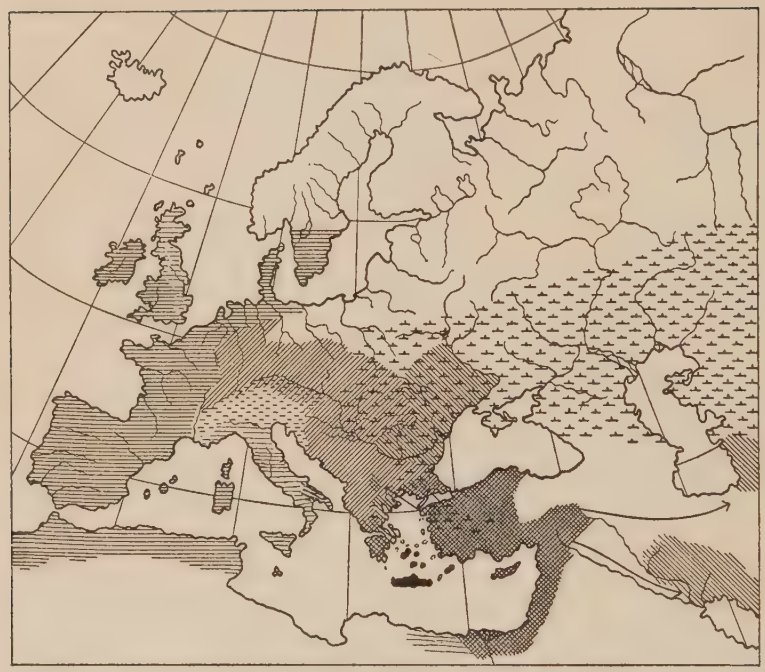
Convergent Influences in Early Ægean Culture

We have by this time proof from wholly archaeological evidence, and quite independent of any reference to actual human remains, of that convergence of two distinct cultures, one Mediterranean, the other from Asia Minor, into the Cyclades, which the earliest human remains indicated; of the coalescence of these two cultures in various local schools; and, thereafter, of a notable originality of handling, early enough, and aggressive enough, to influence considerably the Early Bronze-Age culture of Crete. For in Crete the country was larger and more mountainous; better watered indeed, but consequently more obstructed by the great forests, which the timber work of the later "palaces" reveals. Crete, indeed, to Cycladic explorers of these early days, must have seemed a "new world" to be domesticated gradually and piecemeal, and (as the differences between local pot fabrics show) in competition with other explorers from Asia Minor, perhaps also from the Greek peninsula. But western Crete is ill-explored as yet, and southern Greece had, so far as we know, no recognizable culture of its own at this early period. Blurred offshoots of the derivative "gourd-ware" culture of Macedon were probably spreading gradually southward through the peninsula; but the same coalescence of gourd

forms and leather forms as is seen at Hissarlik, as well as an early spread of Cycladic gourd forms to the mainland, make the mainland repertory very difficult to analyze.

That the newcomers into the Cyclades from Asia Minor brought with them other elements of culture, besides their "red ware," is shown by those instruments of music, double flute and three-cornered lyre, which are played by marble figures from graves of the Early Bronze Age;[42] for both these instruments are characteristic also of the votive figures from sanctuaries in Cyprus, when we first detect them in the Early Iron Age; and of the orgiastic rituals in the interior of Asia Minor, which we have already had reason to regard as aboriginal there; both were also regarded by the classical Greeks as Asiatic and alien from their own religious rituals. But whether the Cycladic musicians are ritual or secular players; and whether their instruments were introduced as accessories of an Asiatic cult of the "Ishtar" type suggested by the pose of some of the female figures already discussed, are questions which must await further evidence. At all events both instruments are shown, much later, on the painted sarcophagus from Agia Triada in a scene of Cretan ritual which has nothing to do with an "Ishtar" deity, but is the cult of an enshrined and probably heroized man.

We have been able already (p. 231) to trace, through the association of the "red-polished" pottery with the first widespread types of copper implements, the culture from which the Ægean, as well as the Thracian and Danubian regions, drew its first knowledge of metallurgy (as the moulds from the "first city" at Hissarlik show) and first regular supplies of copper. Some of these copper types certainly reached Crete (which was as unconnected with Cyprus as were the Cyclades till much later) and were included in its more copious repertory, along with other types which are absent from Cyprus, Hissarlik, and all Asia Minor, but are common to Crete and Egypt. Thus from



"Painted-ware" Cultures of Susa, Anau and Tripolje (Ukraine)

"Red-ware" Culture of Asia Minor, and its offshoots.

"Incised-ware" Cultures of Mediterranean and Atlantic Seaboard.

"Bandkeramik" Cultures of Danubian and South Eastern Regions.

"Lake Dwelling" Culture of the Alpine Highland and its Annexes.

"Mound-burial" Culture, indigenous east of Dnieper, intrusive west of it.

Areas left blank are insufficiently explored or irrelevant to present discussion.

Fig. 9.—Principal Cultures of the Near East, Mediterranean, and Peninsular Europe, at the Beginning of the Bronze Age

the earliest phases of the Bronze Age, Crete enjoyed two distinct sources of material culture, Egypt as well as Asia Minor, to an extent which differentiates its progress markedly from that of the Cyclades.

With the specifically Egyptian contributions to the composite culture of the Minoan Age, we are not here concerned.[43] For there is at present no evidence that there was any general inflow of population from Egypt, even to Crete, at any period; and even if there was, during the periods for which there is evidence of Egyptian influence on Minoan arts and crafts, this is so much later than the occupation of Crete by people from other parts of North Africa, revealed by the peculiarities of the neolithic culture at Cnossus, that any Egyptian elements were quite subsequent, as well as subsidiary, in the make-up even of the Cretan people.

Meanwhile, two anomalies, not very significant at first sight, are left quite unexplained down to this point. The first one is the complete breach of continuity between the "first city" and the "second" at Hissarlik—for grass grew over the site and left its unmistakable trace between the two layers of house rubbish, and the subsequent "red-ware" culture failed to make any such impression on southeastern Europe, as the more primitive "black ware" of the "first city" had done. The second anomaly is the supersession, early and rapid, of the "red-ware" fabrics in the Cyclades by light-colored fabrics decorated with paint, and the rapid assimilation of the new art of pot-painting in Crete also. For a new art it was, in ceramic enhancement, notwithstanding the occurrence in Crete of occasional experiments in pot-painting as early as the latter part of the neolithic period.[44]

The last point may be treated summarily. Even at Hissarlik, though painted pottery styles are absent till the "sixth city," a very few painted fragments occur quite sporadically in the lower layers; and at Cnossus the initial

rarity and gradually increasing frequency of such sporadic experiments in pot-painting—from about eighteen feet upwards in the neolithic stratum till, above twenty feet, they form about one-third of the whole output,—probably results in the main from the success of such spontaneous efforts. Much of the earliest Cretan "painting" consists indeed merely in omitting to incise the pattern before putting on the liquid "filling" of white paste.

On the other hand, this does not account for the more abrupt and general adoption of pot-painting in the Cyclades, if only because the Cycladic choice of pigments and handling of them was different from the Cretan. But seeing that any knowledge of painting which reached the Cyclades from outside at all came from oversea, and that any oversea traffic with the Cyclades, with the north wind so prevalent as it is, meant a strong probability that sooner or later Crete must have the benefit of a Cycladic castaway—as indeed constantly happens at all times—all that is necessary to account for occasional Cretan acquaintance with pot-painting—other than its own experiments in white-on-black,—is to discover a pot-painting culture ancient enough as well as sufficiently to windward of Crete, to influence the later stages of its neolithic pottery.

The "Painted-Ware" Culture of Thessaly

Here we come to the most surprising series of discoveries in Ægean antiquity since the revelation of the Cretan culture itself. These discoveries began in Thessaly within a year or two of the excavation of Cnossus, and passed into a fresh phase of activity with the entrenchment of Salonica in 1916–18 and the subsequent opening of Macedonia and Thrace to scientific study.[45] These researches have established three principal points, supplemented of course by many details which it is not necessary to consider here. These concern respectively the character, the source, and the influence and results of an alien and intrusive culture.

In the first place, the plains of Thessaly, which are multiple, and of old were probably separated by woodland along their rolling margins, were occupied, far back in the later Stone Age, by numerous settlements, the pottery of which was habitually painted, in white on red, in red on white, or in black on white, together with other special devices of local interest. Similar settlements of the same "painted-ware" culture, but with various local styles, are distributed through the lowlands of East-central Greece, as far as the district immediately south of the isthmus of Corinth; and the influence of the southernmost extended to the plain of Argos.[46] This culture was already established south of the isthmus before the people of the Cyclades began to exchange their wares with this region of the Greek mainland. Intercourse began before the old self-colored "basketry" ware of the Cyclades was superseded by the "red ware," still earlier therefore than the common use of painted ware in the islands. As there was a settlement of Cycladic people using "basketry ware" only, on the island of Euboea,[47] in close proximity to the "painted-ware" settlements in Central Greece, there can be little doubt that the art of pot-painting reached the Cyclades from this contiguous culture; especially as deposits of obsidian, the natural glass which was being extensively quarried in Melos and exported as far as Crete and Hissarlik from the storehouses of Phylakopi—where it is found in heaps, both worked and in the rough—are commonly found on the excavated sites of the "painted-ware" culture on the mainland.[48]

Though no certain example of the mainland "painted wares" has yet been found on any Cycladic site, and though the comparatively infantile beginnings of the Cycladic "painted ware" itself do not show direct imitation of mainland patterns, however similar their technique, there is one indirect hint of Cycladic indebtedness to the mainland stock of designs. Two, at least, of the local Thessalian schools of

"painted ware" employed, among other patterns, the spirally coiled line, and ornaments derived from this. Of the sources from which they derived it, there will be something to be said in another connection[49] (p. 243 below). Of the great attractiveness of this pattern, due to its optical peculiarities when in rapid movement, it is not necessary to say anything in detail here.

Now not only do the Cyclades, and also Crete, make prompt and copious, varied and highly original use of spiral design, when once they learn to employ it at all,[50]—which was very shortly after the art of painting was itself acquired in the Cyclades, and came into general use in Crete,—but in the Cyclades the spiral is occasionally used quite elaborately, as an element in the incised decoration of the later "basketry ware" and of "polished" fabrics derived from it after the introduction of the "red-ware" process. And further, some of these incised ornaments, though apparently spiral throughout, are composed sometimes of true spirals, sometimes of a much more primitive and easily executed pattern, the target-like "concentric circles."[51] This is what frequently happens when a more difficult or complicated device is first adopted by designers who do not quite understand how to make it; and we shall have occasion to study exactly the same substitution of "concentric circles" for spirals in a much later and quite different context (pp. 451–2).

Derivation of Thessalian Culture from Trans-Danubian

The great significance of the "painted-ware" culture of the Greek mainland is now evident, in view of its influence on the Early Bronze-Age culture of the Ægean; and the second principal conclusion from the same group of discoveries is concerned with its derivation from the "painted-ware" culture of the region between the Carpathians, the Dnieper, and the Lower Danube, which was already known

to some extent before the discoveries in Thessaly, but had been regarded, not unnaturally, as a far-off derivative of the Bronze-Age "painted ware" of Crete or even Mycenae.[52]

This proof in essentials is fivefold. First, there is general similarity between some of the earlier Thessalian styles which have no spiral element, and the earlier phases of the trans-Danubian "painted ware," which also have no spirals. Secondly, a special local style which appears abruptly in the district of southeastern Thessaly, around Dimini—consequently called "Dimini ware"—has spirals interspersed in an otherwise rectilinear design, and drawn in unusually broad solid brushwork. As the pot forms change abruptly at the same stage, it is certain that some people of a different culture suddenly appeared at Dimini and occupied an older site. Now at Cucuteni in Roumania and on other sites of the later of the two periods of the trans-Danubian "painted ware," a similar employment of brushwork spirals as an unfamiliar accessory appeared just before the whole of this culture was swept away suddenly by the paintless and much simpler culture of the "kurgan" folk from beyond the Dnieper.[53] It is inferred from this that spiral-using refugees from Roumania became the spiral-using intruders into Thessaly, which already contained a "painted-ware" population, just as Roumania had had an earlier painted ware before the spiral came into use there. Thirdly, the discovery of settlements of the spiral-using phase of "painted-ware" culture, just south of the Danube, not preceded by the earlier phase of that culture, proves that there was a sudden southward movement of the "painted-ware" people at this later stage in their development; fourthly, on other sites in Bulgaria and Macedonia, sufficient traces of various types of "painted ware" have been found, to supply the necessary connecting-links between the northern and the Thessalian cultures; and fifthly, the apparition of other "painted-ware" cultures both within the Carpathian barrier, and outside it

in Galicia, Moravia, and as far as Bohemia, at a stage approximately corresponding with the extinction of "painted ware" in its old home, prove that the southward spread of this culture was only part of a larger movement which could be demonstrated quite independently of the apparition of the "painted wares" in Thessaly. Far beyond Thessaly, moreover, in Leucas, at Molfetta in South Italy, and in Sicily, the sudden appearance of similar "painted wares," is suggestive, though not yet precisely datable.[54]

Now these repeated and abrupt irruptions of fresh pot fabrics into the northeastern regions of the Greek peninsula are facts of the first importance in respect to the population as well as to the culture of those regions. Among civilized peoples, many arts and industries are acquired, and consequently spread, by mere intercourse, without more than a negligible transference of people from one district to another. But the settlements of the Flemish wool-workers, and French Huguenot silk-weavers in England, and of large bodies of European craftsmen in various districts of the United States, illustrate the close connection which sometimes exists between the spread of an industry and the migration of a coherent group of people. In primitive societies, moreover, the distinction between the proper work of the men and the women is an important one, and usually pot-making is in a strict sense "woman's work." Further, among primitive industries, pot-making is the craft, products of which are least traded from place to place, except as articles of luxury or by sea, simply because pots are so fragile. It may therefore be safely inferred that the common pottery of an early settlement was made close to the place where it perished in use; and often it is possible to prove this by detecting either the actual source of the clay, or some peculiarity of it which has local significance. When therefore there is a sudden change in the style of the pottery of an ancient settlement, especially when this involves changes

in the mode of preparing the clay, it is safe to conclude that a fresh element has appeared among the women of that settlement. This may of course result, in special cases, from the domestication of captured women from elsewhere among their conquerors, and this does not displace the original female population, though it may account for the introduction of a fresh pottery style alongside of that already in use. But in default of positive evidence to the contrary, a change of pot fabric signifies a change of women, and consequently a general shift of population; for the women being the home-keepers are the most sedentary part of any people.

We may therefore safely conclude that in late neolithic times a considerable influx of people occurred from the trans-Danubian flat-land, into peninsular Greece, and that it occupied all the principal lowland areas as far south as Corinth.

These "painted-ware" cultures of Thessaly and the neighboring regions, both south, and northeast toward the Lower Danube, pass through three principal phases. In the first, the "painted" decoration is rectilinear, and resembles that of fabrics widespread around the northern grassland, from Galicia to Anau, Seistan, and Mongolia, and remarkably uniform considering their vast range in space. In the second phase, represented in southeastern Thessaly at Dimini, spirals are employed freely; not however in continuous bands, but as fillings and enhancements of interspaces in rectilinear designs, akin to those of the "painted wares" of Roumania and Ukraine. These are sufficiently explained in connection with other elements derived from the neolithic culture of the middle and upper Danube, a marginal and specialized province of which, best exemplified on Bosnian sites, is a near neighbor northwestward from Thessaly.

That is to say, the spiral design has been borrowed by people who only partly appreciated its decorative value,

and used it as a curiosity to supplement their own customary style. And the general dependence of this second Thessalian style on the later phase of the trans-Danubian, makes it certain that these Thessalian spirals are not borrowed locally, like those of the first, but are elements in a new style, already composite when it spread south of the Danube, as Thracian examples show.

Now the spiral ornament of the Cyclades and Crete appears fairly early, and with full appreciation of its value as a continuous or running pattern. This is not quite what we might expect if it was borrowed from the second Thessalian phase. But there are a few Thessalian vessels of rather early types, with continuous spirals more like those of the Danubian incised styles; and if the Cycladic spirals are derived from such models as these, a rough sequence-date is obtained for the introduction of the second "painted-ware" culture, at Dimini, not later than 2500 B.C.

The Situation in Southeast Europe, and the Lacuna at Hissarlik

The third principal conclusion from Thessalian discoveries relates to the situation which resulted, between the Lower Danube and the Ægean, from the interpenetration of cultures so strongly contrasted as those represented respectively by the old "gourd-type" pottery (which we have seen to have originated in Asia Minor or beyond it) and the "painted ware" from beyond the Danube. For in this early crisis begins the age-long "balkanization" of the countries south of the Balkans under the geographical conditions already discussed[55] in Chapter I.

From the second Thessalian phase to the third the transition is gradual. The painted styles, which vary locally, become degenerate and slowly fade out. Their principal competitors are "smear-wares" (p. 249) spreading from Central Greece, but allowance must be made for similar spread

of unpainted fabrics from the large Macedonian province to the northeast, and also of fabrics and styles akin to those of Serbia and the Middle Danube. As these northern provinces are least explored on their frontiers with the Thessalian, it is not yet possible to estimate precisely their several contributions. All that can at present be made out is the contamination of the southern "painted-ware" cultures, both in Thessaly itself, in Central Greece, and in Macedonia and Thrace, by local cultures, older established and better suited to their surroundings. The "painted-ware" adventurers, that is, failed to establish their mode of life as a permanent element in the civilizations south of the Danube. They served however to interpose, for a considerable period, a broad barrier of fairly uniform, rather lowly, very stagnant communities between the more progressive and aggressive civilization of the Ægean, and the very different events which were in progress in Danubian Europe, after the breakdown of the "painted-ware" régime in its native region east of the Carpathians, where it had long played a similar part as an obstacle to the spread of the grassland peoples from beyond the Dnieper. Stagnant, unreceptive cultures, as well as aggressive and progressive ones, are significant factors in the course of human affairs. It was indeed in close sequel to the corrosion of this Thessalian screen from within, by expansive régimes in Central Greece and the Ægean, that the next great aggression on Greek lands from outside took effect, in circumstances which we shall have to consider later.

For the duration of this "painted-ware" régime in Thessaly and its neighborhood, we have only very general indications at present. For the superposition of its second phase on the first, we have the sequence-date derived (as already explained) from the various uses of spiral ornament. This is in general agreement with the conclusions derived from the course of events in the Marmara region, between the decay of the "first city" of Hissarlik and the establish-

ment of the "second." For the "second city" is dated to the first Middle Minoan period of Crete that is, about 2100 B.C.

Side by side with the predominant white clay vases with pattern in dark paint, Melos and some other islands have a rarer dark-colored fabric, decorated with white, like the early painted pottery of Crete; and on the mainland too this alternative treatment was practiced, and spread even farther and more commonly; probably because white clays were not found everywhere, and smoke stains were less conspicuous on a darker ground. Also, as in Crete, the transition was easy from ornaments incised and filled with white, to white painted decoration; though there is not much of that incised ornament on the mainland sites, except in Thessaly, and in those east coast districts where Cycladic pottery of the Pelòs type had been introduced. Probably therefore white painted fabrics such as that at Agia Marina may be regarded as a further instance of mainland borrowing from the island-world; especially as many of the vase forms in these fabrics are more or less Cycladic.[56] To these fabrics we shall have to refer again shortly (p. 249).

This composite "Helladic" culture spread widely over the mainland; as far west as Olympia and as far north as the Spercheius valley, whence it penetrated over the watershed and is represented in the earlier tombs of Leucas. Throughout Central Greece it replaced the "painted-ware" culture rapidly; but north of the Spercheius valley the Thessalian culture held its own for a while, though there is evidence of intercourse and imports in some Thessalian settlements at the close of the second phase of the "painted-ware" culture. Naturally this mainland culture developed most rapidly and farthest, in the districts most easily reached from the Cyclades, its chief source of inspiration; that is, in Attica and Boeotia north of the Saronic gulf, and in the well stratified sites at Korakou and Asine south of it.[57]

The "Gray-Ware" Culture at "Minyan" Orchomenus

For the forces and events which contaminated the third Thessalian phase with alien elements of southern origin, there is rather better information. But here, to confuse the issue, an unfortunate nomenclature has been superadded to the incompleteness of the record, and the complexity of the material evidence. To describe the Bronze-Age culture of Crete, with its wide oversea connections and its preeminent focus at Cnossus, as "Minoan," was defensible, because Greek tradition distinguished from the Homeric Minos, grandfather of Idomeneus who fought in the Trojan War, an earlier Minos whose genealogical place is within a generation of the last phase of the "palace régime" itself. But when the excavation of the "Minyan Orchomenus" of Homeric and classical times, deliberately undertaken in search of a mainland counterpart to the Cretan discoveries, resulted in the revelation of a sequence of quite different, and at first sight very barbarous remains, the name "Minyan" was arbitrarily applied to a particular phase in that sequence, merely because that culture was the most characteristic of this particular site, and without consideration for the known place of the "Minyan" occupancy of Orchomenus in Greek tradition, which was at earliest about 1400, (and probably about 1330, as we shall see) and therefore some centuries later than the culture which was being proposed as its archaeological equivalent.

In what follows, therefore, these legendary implications will be strictly ignored so long as we are discussing archaeological evidence: for they suggest a limited and quite false perspective of the course of events. The peculiar culture of Orchomenus was decadent before the "Minyan" dynasty arose. If that dynasty, indeed, had anything to do with the culture, it was to destroy it and replace it by something

quite different, as we shall see in Chapter VI. It will therefore save some confusion, and facilitate comparisons, if the third civilization at Orchomenus is provisionally described as the "gray-ware" culture, from its characteristic fabric of pottery.

The origin of this "gray-ware" culture is not yet established. The circumstances of its introduction at Orchomenus are however sufficiently clear. Orchomenus lies on the northwest margin of that large lowland area of Central Greece which was occupied in classical times by the Copais lake-land and marshes. This partial submergence, as in other inland basins in Greek lands, results when the rainfall supplies more flood-water than the natural outlets can discharge by the subterranean channels which are common in all limestone districts. The Mantinean plain in Arcadia is wholly drained by such "swallow-holes" and another Arcadian basin, called Stymphalus in ancient times, and Phonia in modern, undergoes remarkable variations of water level, probably because its underground outfall is a siphon, operating only when the water rises to a certain high level, and then sucking out the whole content of this natural reservoir and causing great floods in the Erymanthus river farther west. In the Copais basin prolonged rain-wash has blocked any subterranean outlets it may have had; but a large part of the district has been reclaimed within living memory and made cultivable, by pumping, and there are remains of an ancient tunnel and other waterworks to which Greek tradition assigned a date in the thirteenth century which accords with their structure and appearance. Such a project has to be examined in connection with another local tradition in Central Greece, about a "great flood," to which (as we shall see) a genealogical date was assigned about 1430 B.C. For the conception that the natural distribution of land and water may be altered by man's enterprise is less obvious or common, than that of remedial restoration of what was,

after some such accidental "cataclysm" as the Greek story describes; and there are other examples of exceptional but local droughts and rainfalls, in Greek folk-memory. The significance of these physical peculiarities of the Copais basin, and of these traditions about it, will appear later; for the moment, all that it is essential to note is that the importance of Orchomenus in early times is not to be measured solely by the present extent of exploitable land in its neighborhood.

The archaeological history of Orchomenus falls into four pre-classical phases, at least; and a fifth is supplied by allusions in the Homeric poems.[58] The earliest phase reveals a settlement in the first Thessalian "painted-ware" culture, which is represented also on several other sites in the neighborhood. This first settlement, like its neighbors, was replaced by a second, representing the northward spread of the mixed culture to which the name of "Helladic" has been given (p. 246), and in which three principal elements are combined. These are characterized respectively (1) by the earth-colored pottery with incised basketry ornament which predominated in the earliest Cycladic settlements; and has been identified earlier in this argument as the contribution of the "Mediterranean" immigrants from oversea; (2) by simplified derivatives of the earliest painted pottery of the Cyclades; (3) by a rather primitive fabric almost without decoration, but intentionally colored all over with a smear of fine dark brown clay. This "smeared" pottery—to paraphrase the German term *Ur-firniss*, which is both ambiguous and inaccurate, seeing that this fabric is neither aboriginal nor glazed—has a wide distribution over the Greek mainland south of the Thessalian "painted-ware" province. It has been interpreted as resulting mainly from early Cycladic influence; and, if this be so, must have originated at a stage when the Cycladic culture itself was dominated by its "red-ware" and "gourd-ware" elements, of

Asiatic origin and before the introduction of painted ornament. But its forms are in sufficient contrast with those of the Cycladic "red ware," and show sufficient resemblance to the earliest self-colored fabrics of Macedonia and parts of Thrace, to suggest an alternative origin, namely that it represents the propagation of that North Ægean culture which we have seen reason already to connect with the "first city" of Hissarlik, into peninsular Greece within the same early limits of time as brought elements of that culture far out into the Danubian region during the later Stone Age.

That "smear-ware" has not been observed below the "painted-ware" layers of Thessalian settlements does not prove more than that these were founded by fresh people on fresh sites; and there is sufficient contrast between the Thessalian plain and the hills round it, to make the plain less suitable for primitive people, and at the same time more attractive to wanderers from the northern grassland. That the "smear-ware" has been artificially colored dark, whereas most of the northern fabrics, which resemble it in form, are self-colored, does not prove derivation from the Cycladic, though Cycladic fabrics of "red-ware" often have quite dull brown tints. But that it has been much influenced by the Cyclades is obvious, especially in the maritime settlements, at Tiryns, Mycenae, Asine, Corinth, Megara, and in Attica; yet there is no greater reason to attribute its peculiarities wholly to this source, than there is to describe the Macedonian jugs with "cut-away necks" to Cycladic influences only. Both fabrics, like those of the Cyclades themselves, derive this and other series of forms common to them all, from the same Asiatic region. The difference between them is rather, that the mainland styles, in Macedon and peninsular Greece alike, seem to have been influenced chiefly by the culture represented by the "first city" at Hissarlik, the

Cyclades on the other hand mainly by the "second city," at a period when the "red-ware" fabric had in great measure superseded the older "black-ware."

The general similarity moreover between the mainland styles, and also the prevalence of dark coloring, have another obvious cause, in their "askoid" imitation of the forms of leathern vessels, which are commonly used among cattle-keeping peoples everywhere, and also among many hunting peoples. As leathern vessels are perishable, their use in ancient times can only be detected through such clay copies; but the survival of leathern bowls, buckets, and jugs, in the more backward districts of most European countries, as well as all through the pastoral nomad cultures of Eurasia, Arabia, and North Africa, supplies sufficient material to establish the characteristic forms of such leather work, and the skeuomorphic rendering of their seams and strap-handles. There is, for example, a well marked "leather-type" element in the forms of some of the Thessalian "painted wares," as there is also in some of the modern painted pottery of Algerian and Tunisian hill-tribes. Usually, however, "leather-type" pottery is darkened, like the "smear wares" of Central Greece, to resemble the dull brown of used leather.

Quite different from these primitive and widespread Helladic "smear-wares" is the new "gray-ware" which superseded them at Orchomenos, in the third stratum. Discussion of this "gray-ware" however must be postponed till other points of difficulty have been cleared up in connection with its predecessor. Its introduction at Orchomenus was clearly a much later as well as a local event, for the "smear-ware" stratum is of substantial thickness, and at Tsani, one of the Thessalian sites where the sequence of style is traceable through no less than eleven layers, the gradual influx of the "smear-ware" culture begins as early as the sixth, but the

"gray-ware" not till the eleventh, probably as a symptom of a new state of things which led rapidly to the desertion of that site.[59]

The "smear-ware" culture of Orchomenus, then, differs hardly at all from that of the rest of Greece, south of Thessaly, so far as its pottery and other industries go. As this culture spreads to the north, it becomes modified in some respects into conformity with the southern varieties of the "Danubian" culture, which was similarly encroaching on Thessaly through Serbia. But as that culture also had self-colored pottery it is difficult to detect its influence among other dark-faced fabrics. It does however present some peculiar though not unique features, of which it is necessary to trace the distribution and significance, before going farther.

Round, Oval, and Square Houses at Orchomenus, and elsewhere in Mainland Greece

These are the forms of the houses, and mode of disposal of the dead. The first stratum at Orchomenus contained round huts, with very simple rubble foundations, and a superstructure of mud brick or wattle. In the "smear ware" settlement the house foundations are not circular, but of oval, horseshoe, or long "hairpin" form; with sides, that is, of varying length and curvature, but always with at least one oval end, and sometimes two. Similar "oval" houses are widely distributed in the districts where "smear wares" prevail; in Thessaly where the "smear ware" steadily extended its range (as we have seen) at the expense of the old "painted-ware" culture; as far south as the Corinthian Isthmus (though at Tiryns the houses of this culture are round); and as far west as Thermon in Ætolia, and Olympia in western Peloponnese. In the settlement at Korakou, close to the Isthmus, the "oval" house first appears above a burnt layer, and in company with fully formed "gray ware" of the kind which appears at Orchomenus in the third stratum; at

Thermon also it is accompanied with a local fabric of "gray ware"; elsewhere the associated pottery is of the old "smear ware"; and at Orchomenus "oval" houses and "smear ware" alike are devastated, and then "gray ware" appears along with rectangular houses of quite different construction, and a fresh type of burial in graves lined with stone slabs. Among such confusion, only this is clear, that it was a period of confusion; that the "oval" house appeared rather widely within the "smear-ware" area, at a time when this culture was spreading at the expense of the "painted wares," especially to the northward; and that it was still so spreading when the "gray ware," already full-grown, appeared in a central district of this expanding culture, and itself spread rapidly both north, south, and west, overtaking the spread of the "oval" house at Korakou.

Now this "oval" house is difficult to explain.[60] It is ill-adapted either to stone-walling or to timber construction; yet when it appears the use both of stone and of timber was already quite well understood within the "smear-ware" region, as well as rectangular planning both north and south of it. If, however, these oval foundations were designed to support a "wigwam" or "lodge" framed with slight poles bent inwards and lashed together, and covered with skins, matting, or wattlework, their oval plan (which seems primary) would be explained, and also the gradual assimilation of it to the ordinary straight-sided dwelling, conserving only an oval end, or ends, for some customary purpose, such as worship, seat of honor or other kind of "sanctum." But while this type of construction is difficult to explain in a country so well supplied with building-stone, and also with large timber, as many parts of Greece certainly were still, even in classical times, especially in the central highlands and in the west country, it is a common and obvious construction among hunters and nomad herdsmen on open plains, where neither stone nor logs are to be had, and even light poles have to be

collected where they can be found and carefully preserved; but where, on the other hand, hides and thongs are plentiful, and all huts have to be dismantled easily when the camp moves on. Dwellings of this kind are customarily used still by Tatar nomads all over the Eurasian grassland; mounted on wheeled carts, they were characteristic of the ancient inhabitants in Greek times; and one of the "ochre graves" of the Kuban district north of the Caucasus contained a clay model of such a waggon with its characteristic "tilt" roof. It is certain therefore that this type of dwelling was in use on the grassland in very early times. Taken by itself however, the "oval" house does not prove more than a change of habit in architecture, natural enough in the neighborhood of the Copais marsh, where reeds are easily obtained.

But another peculiarity of the houses at Orchomenus needs explanation, namely the habit of burying ashes and other house-refuse in a pit within the dwelling, instead of throwing them away outside. Similar indoor ash-pits are still in use as cooking-places in some districts between the Danube and Ægean. In a permanent village this seems both insanitary and improvident, but on grassland, and among migratory people, it is intelligible, and indeed is the only quite secure precaution against accidental prairie fires: to watch the house fire in such communities is not so much to prevent it from *going* out, as from *getting* out. But this too is a reasonable precaution for dwellers in a fenland to adopt; in summer, dry reeds are as inflammable as prairie grass.

Again, the rather frequent burial of infants under the houses of this culture is less a proof of infanticide than of the desire for offspring characteristic of all pastoral peoples: for the best chance of recapturing the strayed souls of these little ones was to bury their bodies in the closest proximity to their parents, so long as the family remained in the same camping ground at all. Such infant burial was remembered in classical times as an ancient custom.[61]

For adults, the mode of interment in this phase of culture varied. One adult has been found built into the wall of a house of this period, on a site in Ægina where there were also house-burials of infants, and a kind of "gray ware" was in use, though the settlement contained also Cycladic pottery. Whereas the older "smear-ware" people of north Peloponnese sometimes buried in caves or artificial rock-chambers approached by a shaft—unusual types of tomb in Greece, but both usual all through Asia Minor and Syria, and therefore perhaps primitive among Mountain-zone people,—the northern districts of "smear-ware" folk and also the "gray-ware" invaders of the Korakou district at the Isthmus usually buried in surface graves lined with stone slabs, such as are sometimes found in the mound burials of the northern grassland, though also in the Cyclades and Crete. But occasionally, as in Leucas, off the west coast of Greece, and also at Zygouries south of the isthmus, the cist grave, or (at Leucas) a group of such graves, is surrounded with a circle of stones, as though the custom of burying under an earth mound were gradually fading out. At Drachmani in Phocis, there is an isolated burial which is described as a mound containing a skeleton in the regular "contracted" posture, with self-colored pottery, one vessel of degenerate painted fabric with the "butterfly" ornament characteristic of the earliest Middle Minoan phase in Crete (not later than 2000 B.C.) and a one-edged knife of bronze, also of a type used in Crete at that time.[62] There are many mounds farther north, in Thessaly, Macedonia, and Thrace, and though some of them are certainly of various later dates, the fact that even a single one is as early as that at Drachmani makes it necessary, in view of the peculiar interments at Leucas and Zygouries, and of the peculiarities of the "oval" house culture at Orchomenus, to review the whole situation rather more widely.

What confronts us, then, is a "smear-ware" culture of admittedly complex origin, which begins to encroach steadily on the "painted-ware" culture north of it, at a phase when, without other general change in the material arts, a new type of house, and new types of burial, appear customarily at Orchomenus, and also more irregularly farther west and south, accompanied in north Peloponnese by symptoms of violence, and eventually superseded in turn by a new and different culture out of Central Greece. We have clearly to look for some disturbing cause, (1) such as to operate in Central Greece without at first disturbing the "painted-ware" culture of Thessaly, through which it must have passed; (2) such as to change partially the habits, while adopting the material culture, of the "smear-ware" folk; and (3) such as to give the "smear-ware" population that impulse to expand, northward and westward first, and then southward also, after being equipped, as we shall see, with fresh arts and industries, not wholly of local invention.

Causes of Breaks in the Sequence at Hissarlik

This brings us back to that other anomaly of which we were obliged to postpone discussion (pp. 236, 245), namely the break in the sequence at Hissarlik, between the "first" and the "second" city: to which we have now to add the devastation of the "second" city by fire, and the reoccupation of it, partly by the remnant of its own inhabitants, as the continuity of the "red-ware" pottery shows; but partly also by newcomers, of whose physical characters we have already learned something from their actual remains among the lowest débris of the "third" city (p. 51).

These two breaks are however of different kinds. There is no evidence that the "first" city was burned or forcibly destroyed: it rather seems to have been deserted. In any case, the grass grew over its ruins, till the "second" city was founded above them; and by that time the old "black-ware"

culture had been supplanted by the "red ware" with its wide eastward affinities. All this presumes a considerable lapse of time; and as the establishment of an unfortified settlement—as the "first city" was—in this far corner of Asia, overlooking an easy crossing into Europe, implies habitual and peaceful intercourse between these adjacent regions, it follows that its decline and disappearance requires for its explanation some cause of disturbance on one side or the other. Now the evidence of general continuity between the "black-ware" and the "red-ware" cultures in Asia Minor, though very fragmentary, is sufficient to show that there was no profound change in the mode of life on this side. There was improvement of technique without abrupt replacement of forms; there was increased familiarity with copper implements; and the wide range of communications indicated by the numerous foreign objects in the "second" city points also to steady advancement, not to forcible supersession of one people by another. The cause of disturbance must therefore be sought on the European side.

Here we are already acquainted with the widespread and repeated intrusions of the "painted-ware" culture from beyond the Danube through the lands north of the Ægean into Thessaly and beyond it; beginning, as we have seen, before the "red-ware" culture began to affect the Cyclades, and continuing till the influence of that culture was superseded among those islands by "painted-ware" influences from the Greek mainland itself. We have seen however, also, that the people of the "painted-ware" culture in its cradle-land on the "black earth" region was mainly, though not quite wholly, of Alpine type. Consequently this movement involves no profound or abrupt replacement of one race by another, but rather the gradual spread of tribes quite loosely connected with each other through a region, sparsely populated, in which (as the continuity of culture in many parts of Thrace and Macedonia shows) the old "black-

ware" culture remained fundamental, though it was modified, especially in southern Greece, partly by its own local discontinuity, but partly also by Cycladic contacts in the period of "red-ware" influence, and perhaps even earlier.

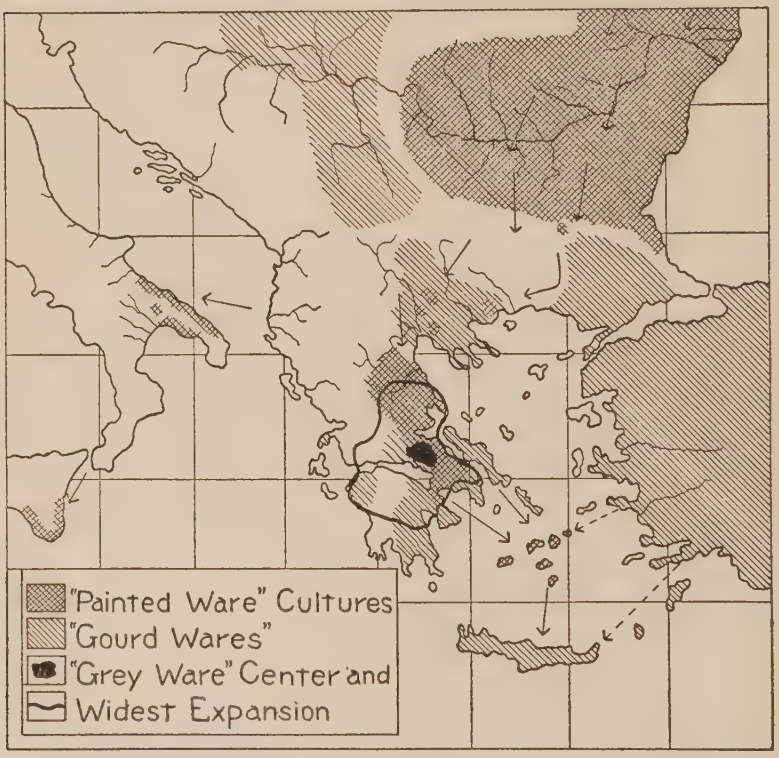


Fig. 10.—Principal Non-Minoan Cultures and Non-Minoan Elements in the South Aegean.

The result was the variable medley of local styles which have in common the preference for dark-colored wares, and did something to standardize their practice by the general adoption of the dull "smear" treatment.

Of the blend of physical types which resulted from intermixture of aboriginals and "painted-ware" folk we know nothing, because human remains, even if any have been

recovered from these sites, have not yet been described; and as both these sets of people seem likely to have been predominantly "Alpine," it will probably be difficult to detect intermixture at all.

With the replacement of the "second city" at Hissarlik by the "third" it is different. Here the crisis was certainly violent, and the human remains in the "third" town include individuals of "northern" type, as we have already seen (p. 51 above). As it was the westward and southward movement of people of this type from the old "ochre-grave" region beyond the Dnieper, that dispelled the "painted-ware" people, and scattered conspicuous burial mounds all over the "painted-ware" country, the geographical distribution of such mounds should indicate the extent of their incursions, since the "painted-ware" people did not dispose of their dead in this way. Now *tumuli* of this kind—to substitute the familiar Latin name for burial mounds outside that northern region—are common in most parts of Thrace and Macedonia, and occur also in Thessaly. Farther south they are very rare and of uncertain age, and many Thessalian and more northerly *tumuli* are of various later periods. The custom of mound burial, however, seems to have been introduced here suddenly and widely. As there are similar burial mounds on both sides of the Dardanelles, and others in Phrygia, Lydia, and Caria, regions of northern and western Asia Minor, and as some of them contain burials of the earliest Bronze Age, it is certain that we have here a further extension of this custom. That Thracian mounds sometimes contain "painted ware," and Phrygian mounds pottery of fine "black-ware" fabrics, does not preclude us from classing such mounds with the rest, because an invading and conquering people, in small raiding parties, readily adopts the crafts of the local population, while conserving its own beliefs and customs. This is the sure explanation of a crisis which introduced a new type of interment, while leaving the

pottery unchanged, as at Hissarlik, and establishing, so far as can be discovered as yet, no new type of settlement in connection with their tombs. Probably these sporadic *tumulus* folk "traveled light" and accompanied by few of their own women.

One further point must be considered at this stage. We have seen that the new distribution of *tumuli*, continuous from the Dnieper to Thessaly, ends rather abruptly in Central Greece. Now it frequently happens that a raiding movement, of the kind which has been identified here, when it meets with a serious check, and when as in the *Lay of Horatius*

> Those behind cry 'forward'
> And those before cry 'back,'

results in concentrating a more or less compact body of immigrants in the farthest occupied region. And such concentrated groups may last long, even when the stragglers have been obliterated along the avenue of access. Examples are the Gauls between Alps and Apennines, and in Galatia, the Phrygians before them in central Asia Minor, the Thracians (as we shall presently see) at the Sea of Marmara, the Volga Finns in Bulgaria, the South Slavs in Serbia, the Magyars in Hungary, the Vandals in Tunisian Africa, and the first "northern" immigrants on the Baltic shores. It would not be surprising to discover such a "nest" of concentrated and isolated folk of "northern" origin, on the southern margin of the "tumulus" region in the Greek peninsula; and the southernmost mound burials in peninsular Greece are at Drachmani in Phocis and Aphidna in Attica.

Now this is at the same time the district within which we have been already compelled to look for a place of origin for the new "gray-ware" fabric and for the new disturbing factors of which it is the most conspicuous symptom; and

into some districts, as we have seen, "oval" house, and "gray ware" intrude together. Is there any connection between these two intrusions, and if so, what is it?

The Gray-Ware Culture at Orchomenus

After a considerable interval, the "smear-ware" culture at Orchomenus, with its oval houses, domestic ash-pits, and house-burials, was superseded, suddenly and violently, by a third culture, which is still one of the chief puzzles of prehistoric archaeology in Greece. As this new culture itself was displaced, in part at least, by the spread of the Minoan culture from the south Ægean not later than 1400 B.C. —and probably a good deal earlier, as the splendid "Treasury of Minyas," at Orchomenus itself, proves,—its arrival at Orchomenus must be placed considerably earlier still; and it must have been early enough at Orchomenus to precede, and probably (as we shall see) to cause the violent supersession of the mixed "smear-ware" culture of northern Peloponnese, and to undergo itself a marked change in that area of conquest and settlement, before the Minoan culture from Crete appeared around the head of the gulf of Argos, an event itself securely dated not later than about 1700 B.C. As we have an approximate date about 2000 B.C. for the mound burial at Drachmani, this fixes the rise of the third culture of Orchomenus within a period of about three hundred years and probably not far from the upper limit of it.

This new culture had dwellings which were neither round huts nor oval wigwams, but square-built houses with several rooms. It is a tempting conjecture that these houses incorporated either the single-room huts of the early Thessalian settlements, or the oblong dwellings, with door under a portico at one end only, such as are found in the "second city" at Hissarlik, and resemble so closely the form eventually adopted for the dwellings of gods in classical Greece.

But very little is known of these new houses at Orchomenus, except their ground plan, which is more complex than either of the suggested prototypes, and also does not seem to contemplate any portico or vestibule. From the character of the foundations, it is not even certain whether the superstructure was of stone or of timber. All that may be said is that they represent a far higher and better organized mode of life than anything hitherto established in Central Greece, and yet that they present no positive resemblance either to the earlier houses of the Cyclades and Crete, or to the grouping of such houses round a courtyard, which seems to be fundamental in the contemporary Cretan "palaces." It must however be noted that the period of their introduction at Orchomenus is also that of the "first palace" at Cnossus, and it is possible that there may be some further connection between these two advances in construction; but here evidence fails us at present.

The mode of burial changes also; for there are now well constructed cist-graves, lined with slabs, in which the bodies are placed in the "contracted posture" and fairly well furnished with pottery, implements, and the like. This, too, is nothing new, for such graves were customary in the Cyclades and Crete from early times; it is only the more substantial construction and orderly furnishing which marks a new tradition in Central Greece, and is propagated wherever the new culture spreads.

Far more obvious, and valuable as a symptom, in tracing the distribution of the new régime, is its very remarkable pottery, which arrived at Orchomenus already mature, and consequently was not invented there.[63] This pottery is wheel-made, and has a distinctive repertory of forms; open bowls on a high foot, which is usually modeled with a number of horizontal concave mouldings or rings, as easily turned in suitable clay, as in wood on a lathe; deeper bowls with a pair of loop handles rising high above the rim; vessels with

similar handles, globular bodies, and narrower neck; and so forth; all shaped in bold profiles, with well designed rims and necks. The boldness of the profiles often suggests those of turned woodwork; the high handles, the strength and rigidity of metal work, and sometimes there are clay rivet heads as in the Cretan copies of metal vases. It has been natural also to suspect that the clean gray tint of the clay itself may be intended to imitate silverware. The gray color is all due to charred organic matter, not (as has been suggested) to the deliberate restriction of the draught in a closed furnace, nor to reduction of all iron contained in the clay to the gray silicate as in the "blue-brick" of Staffordshire. Those processes presume great experience and skill, and moreover do not account for the carbon-content of this ware. Probably, like the mottling of "Vasiliki ware," and the "black-topped" varieties of "red ware," it was first achieved accidentally, and perfected by experiment. Its artistic value, like that of the *bucchero nero* of Etruria, long afterwards, was that, with suitable clay, the pots could be given the color, as well as the forms, of metal work.

Most characteristic of all is this standard gray color, and the smooth finish of the surface. The clay is specially prepared, so as to give a peculiarly smooth soapy "feel," unusual plasticity, and uniform iron-gray color after firing. The only natural clays which have this soapy quality and high plasticity are those which contain a considerable amount of magnesian minerals; and probably the original home of this fabric will be found in some secluded district where such a clay has resulted from the weathering of some mass of magnesite or serpentine such as is fairly common in the older rocks of Greece. Large deposits of magnesite for example are now being worked in North Euboea, adjacent to the "gray-ware" region. These speculations, however, are only submitted at this point to show how meager is our present knowledge and (still more) how defective is

the customary method of attacking a scientific problem of this kind. For there is much scope, in archaeological research, for the special skill of the geologist, the chemist, and the physicist.

Since no neighboring region offers any trace of the antecedents or models of this "gray ware," it seems necessary to conclude that it originated locally, that is to say somewhere in Central Greece. It was indeed a reasonable suggestion, at an earlier stage in the enquiry,[64] that its source should be sought among certain new elements which appear at Hissarlik in the "third" and "fourth" cities, and are intensified in the "fifth" and "sixth." But the evidence now available as to the relative antiquity of the various "gray-ware" fabrics, and especially the dates of its contacts with the Cyclades, makes it certain that the culmination of this style in Central Greece is earlier than its greatest vogue at Hissarlik, and that the introduction of "gray ware" there results from oversea communication with a home-land west of the Ægean.[65]

For very shortly after its introduction at Orchomenus, the "gray-ware" culture appears among the primitive "smear ware" and local "painted wares" on all known settlements in this neighborhood. It spread steadily northward, first into the Spercheius valley, then into one district of Thessaly after another, and was widely popular in northeastern Greece before the first coastwise introduction of Cretan civilization from the South Ægean. It is within the period of this northward expansion, that oversea contact was established with Hissarlik and Macedon.

Southward, too, the "gray-ware" culture intruded into Peloponnese, and superseded[66] the mixed culture of "painted ware," "smear ware," and "Cycladic" fabrics in the stratified settlements at Korakou and Asine. This gives us at all events a relative date, and links the whole course of events in Central Greece with that in the Cyclades especially as

examples of the finest "gray ware" of Orchomenus were imported occasionally into Melos, whence were derived the obsidian flakes which are found on the mainland sites where such "gray ware" was habitual. Though no very precise date can be given as yet for mainland events, the contacts with Melos and neighboring islands are securely assigned to a period not much later than 2000 B.C.; and this falls close to the upper limit of the period within which we have already seen that the "gray-ware" culture became established at Orchomenus itself.

In this southern area of "gray-ware" conquest and exploitation—for the arrival of this culture was sudden and accompanied by wholesale ravaging of the district—a notable change took place in the quality of the "gray ware" itself. Immediately southwest of the Isthmus lies the copious supply of fine pot-clays which later made the fortune of the Greek potters of Corinth. But these clays vary from buff to cream-white, and as the special treatment which had originated the "gray ware" was ineffective with clays so poor in iron, the derivative fabrics of this district, and of the plain of Argos farther south, were buff-colored, and remained so till the end of the Bronze Age. Even when the Cretan civilization was established subsequently in Argolis, the local potters made only sparing use of its abundant repertory of painted ornament. At Corinth, which from the Argive point of view was in the back-country, a peculiar local style, picturesquely labeled "Ephyrean" by its discoverer, combined the smooth self-colored finish of the traditional "buff ware" with "free-field" representative designs selected singly from that repertory, and only slightly specialized to fill their independent rôle; a development of which we have had instances already (pp. 229, 232).[67]

Though the origin of the "gray-ware" technique seems to be somewhere in Central Greece, a quite local discovery in an art so domestic as pot-making is not in itself sufficient

to account for the release of so vigorous and aggressive a culture as that for which it is the chief material evidence. Potters do not invade other people's lands and burn their settlements for the zeal of teaching them to make the "right sort" of pots. We have therefore to look farther for the source of the driving-power which spread the "gray-ware" culture far south into Argolis, northward into Thessaly, and oversea to Macedon and Dardanelles.[68] We have already seen that the northward spread of the "smear-ware" culture into Thessaly followed the introduction of the oval house, and also of mound burial, into Central Greece. We have also to recall the contemporary encroachment of Danubian culture into the mixed "third culture" of Thessaly, which resulted; and we have to note the ease with which fabrics of pottery akin to the "gray ware" of Central Greece established themselves at Hissarlik in the cities from the "third" to the "fifth."

Yet another piece of evidence points even further in the same direction. In the interior of Asia Minor there are fabrics in which the old gourd forms are imitated in an iron-gray clay, sometimes painted with simple white binding-patterns. And in the Middle Bronze Age of Cyprus, about the time of the Twelfth Dynasty of Egypt, and therefore not far from the dates of the destruction of the "second city" of Troy, and of the establishment of the "gray ware" at Orchomenus, there appears, side by side with the first introduction of painted pottery, from the adjacent mainland, a fresh fabric in which the natural cream color of the clay is disguised by a dense iron-gray surface layer or "slip," and the forms of this "black slip ware" though very different from those of any Ægean fabric, are also quite new in Cyprus.

These scattered apparitions of "gray-ware" fabrics would be of little interest, if it were not that they occur on the margins of a region which, when we begin to see more of its higher culture, after 1500 B.C., turns out to be the world's

first source of copious silver, during the later days of Hatti exploitation of the mineral resources of Asia Minor. For they give some support to the obvious suggestion, that the color, and also the metallic aspects of the "gray ware" of Central Greece may result from the attempt to imitate silver vessels in clay. If the creators of the "gray ware" of Orchomenus were in possession of silver supplies, or had access to them, their peculiar pottery, and also their rapid advance to power and conquest, would be simply explained.

That there had been such a people and silver-using culture in Central Greece we have already reason to suspect from our examination of Hesiod's retrospect of antiquity. His graphic description of the "blissful corpses" of the Silver-Age men, who "did not worship the gods," and were superseded by the Bronze-Age men who were "born of ash-tree nymphs," and "did not eat bread," and spent themselves fighting one another, is surely grounded in the folk-memory of Boeotia. His Silver Age, separated by the Bronze Age from that Age of Heroes which included the wars about Thebes and Troy, stands in striking analogy with the "gray-ware" culture which faded out before the Minoan exploitation of which the "palace" at Thebes and the splendid "treasury" at Orchomenus itself are monuments; just as Minoan exploitation faded before the confused and demoralized Late Mycenaean, which so closely corresponds in date with the Heroic Age in Greek tradition, and immediately precedes the full advent of an Iron Age in this region.

Several attempts have been made to identify these Silver-Age men, and the "birthplace of silver" whence they drew their wealth. Silver was certainly copious in the "second city" at Hissarlik, but the forms of the silver vessels there do not resemble those of the "gray ware" at all, and only remotely resemble the clay vessels with cylindrical covers, in the "second" and subsequent cities at Hissarlik itself. There is silver also in early Cycladic graves, but not

in great quantity, nor in suggestive forms. The silver cup from Gournia in Crete illustrates the models of a whole series of Middle Minoan vases in clay, both there and at Cnossus; but their forms are purely Minoan and their decoration is in black glaze with polychrome ornament, and therefore prove only Minoan use of silver, not silver production, and contribute nothing to the "gray-ware" problem. In classical times, Attica, Siphnos in the western Cyclades, and Myndus on the Carian coast, were mining and trading silver on a large scale; but there is no proof that these workings are early. At Mycenae, silver is far rarer in the "shaft-graves" than gold, and it is only rarely that even a gold cup recalls a "gray-ware" vase form.[69] Clearly we have to wait for fresh evidence before basing any argument on the metallic appearance of the "gray ware."

Similarly the suggestion[70] that the fine "gray-ware" was fashioned in a mould, not on the wheel, does not help to trace its origin till some parallel has been found to this most unusual technique; which, moreover, does not seem to have been observed in "gray ware" except at Asine, and needs further examination in view of the thoroughness with which much fine "gray ware" has been polished, to the destruction of its original surface, and consequently of the crucial evidence for moulded technique.

Though the "gray ware" of Orchomenus owes its characteristic color to carbon, not to ferrous matter in the clay (p. 263), the process by which this color is produced needs a smoky fire and yields much soot. Also, it is as an accidental product of one of the primitive "black-ware" processes, which need similar conditions, that the "gray ware" is most likely to have originated. Similar "gray-ware" fabrics emerge in "black-ware" cultures elsewhere; and there is a quite black fabric among the pottery of the earlier layers at Orchomenus itself, and on other sites in Central Greece, as well as in Thessaly. That there is no continuity at

Orchomenus between these earlier hand-made "black wares," and the wheel-made "gray ware" which is under discussion now, is no bar to this explanation; because in any case the "gray ware" appears at Orchomenus fully developed, and therefore must have been invented elsewhere. For the origin of such a fabric, it is obvious that a natural clay heavily charged with decayed vegetable matter is the simplest possible cause; and Orchomenus is so close to the Copais marshland, that it may turn out that the place of origin of the "gray ware" is within this marshland itself, and has been submerged or silted over later. That the Copais was formerly much smaller, and that its great extent in Hellenic times was due to obstruction of its outlet, is certain; that its area had been deliberately reduced in Minoan times is also certain, from ancient tradition and existing remains of great drainage works; a great rise in the water level, earlier still, is suggested by the folk-memory of "Deucalion's flood" (which is reserved for discussion in another context, p. 363); and that "before Deucalion's time" there were settlements far out in the marshland, is further indicated in Greek tradition, and confirmed by recent observation, though none of the likely sites have been excavated as yet.

For the establishment of "gray ware," approximate dates are supplied by its association, among imports into Melos, with the polychrome-painted Middle Minoan fabrics current about 1900, and by its occurrence in the "shaft-graves" at Mycenae about 1750. By about 1500 (Late Minoan II) its vogue seems to have been over, and before this it had been generally superseded in Argolis by its "buff" derivative. At Korakou and Asine its irruption is dated, by associated pottery of Middle Cycladic styles, to about 1900; and probably its arrival at Orchomenus was not much earlier, though the remarkable uniformity of "gray-ware" forms and technique makes it difficult to estimate intervals within its

total vogue. The resemblance between its mature forms and certain experimental types, in the "second" and subsequent cities at Hissarlik, may eventually be found to explain its origin, but is not close enough to determine at what stage, if at all, "gray ware" diverged from such normal self-colored wares; and the reputed prototypes are hardly earlier than the mature "gray ware" which reached Melos about 1900. On the other hand, the gray local fabric of a small site in Phocis, within a day's ride of Orchomenus, shows fairly typical "gray-ware" cups associated (as also at Asine) with various other shapes in gray clay, including ordinary household ware of poorer quality.[71] Here we certainly seem to be not far from a real source of the standard "gray ware"; and we may reasonably ask, how far this district of Phocis fulfils the other conditions of the "gray-ware" problem?

It is, of course, a different question, why such natural facilities as these were exploited in this particular region and period, with such exceptional skill in the use of the wheel, for the production of a fabric of pottery so closely and deliberately imitating vessels of metal and especially of silver; and why this fabric, once achieved, was established at Orchomenus, and propagated so rapidly and so far afield. To this question, the answer is surely to be sought in connection with the other new feature of the third culture at Orchomenus, its square-built, complicated houses, so strongly contrasted with the round and oval huts of its predecessors, and so closely related to the house-types of sites in Argolis and other parts of the Greek mainland, whither the "gray-ware" culture was propagated.[72]

The Foursquare Houses at Orchomenus

Foursquare construction in architecture is as widespread as it is, because it depends for its achievement on a very widespread building material, namely timber, which enforces straight walls and partitions, and especially determines

the forms of that most essential constituent, the roof, whether it be of gable shape or flat;[73] and it is the shape and design of the roof which determines the relation of ends and sides to each other. Conical or hemispherical roofs require curved walls, except in very advanced architecture; gable roofs and flat roofs alike presuppose longitudinal and transverse timbering, beams and joists, or ridgepole, rafters, and ties; and consequently the rectangular junction of side walls and ends. In Crete and the Cyclades the flat-roofed house, which is ubiquitous and of great antiquity throughout the comparatively rainless region of the Mediterranean and the Mesopotamian lowland, was habitual as far back as our evidence goes; though as we have already seen, the more primitive hut, circular in plan, and axially symmetrical also in its conical or hemispherical roof, which survives locally all through northwestern Africa, in the Roman Campagna, in the *nuraghe* of Sardinia, in the stone *truddhi* of Apulia, and in the turf cabins and "round towers" of Ireland, has left its mark in the corbel-vaulted charnel houses of Crete, in the modern cheese stores of Mount Ida, and in the "round houses" of the first culture of Orchomenus. At first sight, then, the foursquare houses of the "gray-ware" stratum of Orchomenus might seem to betray, like those of Korakou and other sites in Southern Greece, the influence of oversea design. But the total absence of other Minoan elements from the third culture of Orchomenus makes it necessary to look for an alternative explanation.

Wherever the rainfall is sufficiently heavy, and (what is more important) sufficiently intermittent around the year, flat roofs are replaced by gable and lean-to, provided there is timber long enough and straight enough to serve as a ridgepole and carry rafters. In the more primitive gable roofs, the ridgepole is not carried on the walls, but upon a forked post set upright within each gable end; this survives in the gable-roofed houses of the Kabyles in Algeria,[74]

and in ridge-tents everywhere.[75] If the house is to be longer than a single ridgepole can roof, the overlap of two ridgepoles in line is carried by an intermediate prop,[76] or the end props are brought nearer together, and rafters rest on all four walls, forming a "hip-roof" such as is common, though not primitive, in the highlands north and west of the Ægean.[77] The principal building of the "sixth city" of Hissarlik[78] has three such posts down its middle line. As provision must be made for the drip from the eaves, gable-roofed buildings normally stand separately; this too is well seen in the "second city." If they adjoin, it is either end-on, or at right angles.[79] A hip-roofed building, dripping from all four eaves, necessarily stands free, except for lean-to aisles or stoups.

In highlands, where the supplies of rainfall and timber are sufficient, gable-roofed houses are found far to the southeast; in the Troodos range of Cyprus, in Syria, Kurdistan, and North Persia, as well as in the Caucasus. Very primitive types persist in the highlands northwest of the Ægean,[80] and the *châlet* and log-hut are in practically universal use throughout the forested peninsula of Europe until Roman times. Early examples are supplied by the timber-built lake dwellings of Switzerland and Austria, and by the derivative "terremare" of the Po Valley. At Orchomenus, the roofs and upper part of the walls have perished, but the grouping of the rubble foundation-walls suggests gable-roofs and especially hip-roofs.[81]

Though there was not at Orchomenus anything corresponding either with the "palace" type of construction, characteristic of Minoan Crete, nor with the "megaron" house as it appears later, fully developed, at Mycenae, Tiryns, and Athens, the peculiarities of the latter have been so generally interpreted as evidence for its northern origin, that this seems to be the place where they may be discussed most appropriately. It is common knowledge that in the

Cretan "palaces" the principal living-rooms are incorporated in a complex of buildings irregularly distributed round one or more open courts; that there is provision for draining roofs and courtyard, and for the storage of water in tanks below internal "light-wells"; that there are no fixed hearths, but only portable braziers; and that living-rooms communicated freely (and sometimes on their longer side) with a courtyard or terrace through openings usually multiple and in even numbers, so that there is a column or pilaster in the axis of the plan. They could be closed by folding doors, but these were countersunk in the pilasters or jambs, so as to be inconspicuous; they were therefore only for occasional use, like sunblinds in England. As room adjoins room, without more than occasional light-wells, as already described, the roofs must have been flat; and this is confirmed by contemporary reproductions of such houses.[82]

In the mainland "palaces," on the other hand, the central and most important feature is a great living-room, with fixed central hearth, louvre ventilation, and single door protected by vestibule and portico, the openings of which are odd-numbered and consequently an opening (not a pillar) must be axial. The courtyard, onto which the portico opens, has a pillared cloister on one or more sides. What is most notable however, is that each of these principal living-rooms (*megara*) is separated from other buildings by a narrow, more or less continuous passage. The significance of this has not been generally recognized; but the position of the hearth, and of the four column bases which surrounded it at Tiryns, Mycenae, and Athens, shows that the roof had a clerestory or louvre, to let out the smoke, and the provision of this vacant space around the building shows as clearly here as in the "second city" at Hissarlik, that it was a hip-roof, like that of a Bosnian or Montenegrin house, and that provision had to be made for the drip from the eaves.

Whether this passage always remained open above, or whether when its convenience as a thoroughfare was appreciated, it was eventually roofed, is immaterial: for whether roofed or not, it seems to have been an architectural convention that it should be there; and its presence strongly supports the probability that the mainland "megaron" is of highland, and, at all events relatively, also of northern origin. But the similar roof constructions in Bosnia and other not very distant regions[83] show, first, that it is not necessary to look even so far as the Danube valley for its antecedents; and secondly that it does not stand in any necessary relation to the dwellings of longer proportions and nave-and-aisle interior, which have gable roofs, and also an alternative and divergent structural history. Hip-roofed buildings, in fact, when they are not quite square in plan are very commonly "broad-fronted," that is, the doorway is in their longer side.

There is then some probability that, though extant examples of the "mainland" or "megaron" houses were built considerably later, the type itself belongs to the third culture of Orchomenus, and consequently was introduced into southern Greece by those who spread that culture; also that the immediate source of the "third" occupants of Orchomenus was in the highlands to the northwest, as indeed the presence of immature "gray ware" in Phocis has already led us to suspect.

The Minoan Culture of Crete

While the "gray-ware" culture was establishing itself in Central Greece, and spreading thence widely to north and south, the main course of events in Crete and the islands was undisturbed by any such anomaly, and therefore may be reviewed quite briefly. Characteristics of the mature Minoan civilization, as it is exhibited in Cretan sites, large and small, are what may be expected in a region where long

continued development and intercourse had occurred, without disturbance from outside. The settlements occupy lowland sites, chosen for convenience rather than security; they lie within, or bordering on, the cultivable land, with convenient water supply, sometimes still available; but natu-

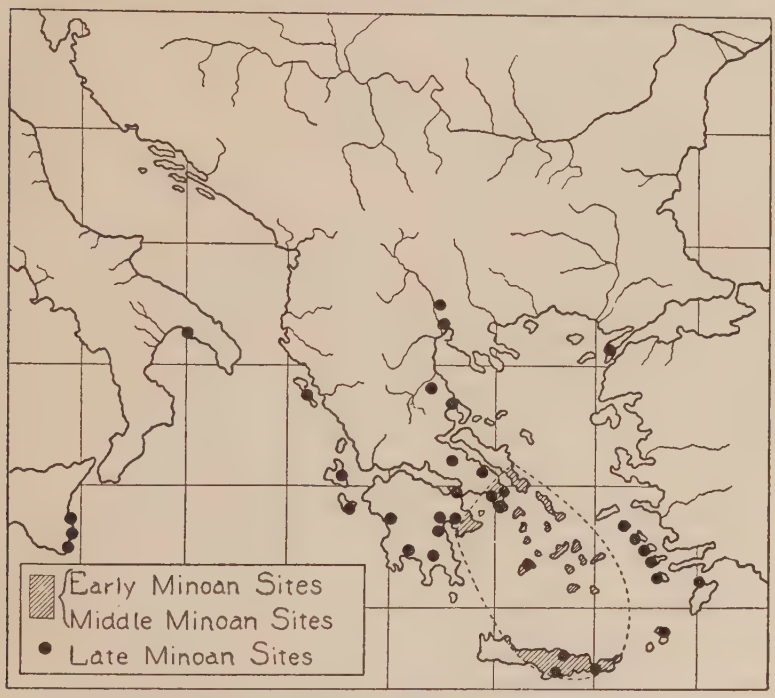


Fig. 11.—Geographical Distribution of Minoan Sites.

rally the best preserved sites are those which have gone dry and ceased to be occupied. Some settlements enjoyed special facilities for intercourse and trade; Phylakopi in Melos was the port for local obsidian; Zakro and Palaikastro at the east end of Crete had safe harbors facing toward Egypt; Gournia had its isthmus, exploited similarly later by Hellenic Hierapytna; Cnossus was connected by a great highway with its own port on the Libyan Sea. Though luxury went

farther in the "palace" centers, there was grace as well as elementary comfort in the country towns, and free intercourse between them and the cities.

Observant utilization of natural resources found expression in really skilful sanitation and water control, soil conservation, road-making, irrigation; and no less in the unusually rich repertory of naturalistic decoration, drawn, like that of Japan alone, from the experience of the fisherman and sponge-diver, as well as the hunter, the shepherd, the farmer and gardener, and from the religious ritual, the dances, the games of athletic skill, which occupied so large a place in social life; their favorite models are acrobats, toreadors and jujitsu men. Abstract conceptions interested the craftsmen less. They could subdivide a circle into fifths and sixths, but as artists, not geometricians; the spiral they drew freehand, for its optical, not its mathematical qualities; their close approximations to parabolic and other curves were achieved empirically when vases of graceful profile were lathe-turned in laminated stone.

In their social life, the freedom, intelligence, and evident distinction of the women are conspicuous; their dress, however elaborated by fashion, remains practical, even rational; they share the most dangerous sport of the men, and dance publicly and to please. Of their embroidery we learn something from its influence on design in general, as well as from votive models of rich dresses. Economic opportunities, in such a modern-looking society, make it the less necessary to suppose that they owed their status to primitive matriarchy, though there was matrilineal organization still in Hellenic times in Lycia, "where men called themselves after their mothers."[84] Even the general reverence to great goddesses, quite as much queenly as maternal, and of various attributes and functions, does not necessarily imply more than the practical importance of the natural processes of growth and fertilization on which all agriculture depends; and the large provision for

storing agricultural produce, in the houses as well as in "palace"-magazines, shows how intimately Minoan prosperity depended on the staple crops, grain, tree-fruits, wine and oil, as well as on the yield of flocks and herds. For all its artistic and technical skill, Ægean society remained rooted in the soil, where women's work counts for so much.

The social structure of any people depends only partly on the traditional organization which it inherits from some type or other of what may be provisionally described as "natural" society, in the sense that the cooperation of its members does not extend appreciably beyond the two natural tasks of maintaining living persons alive, and providing for their replacement when they cease to live. It is doubtful whether there is any community, now in existence, or recognizable in historic times, that has not passed beyond this threshold between animal and human life, at all events so far as to make the simple gear that it requires—for is not man in a fundamental sense the "tool-using" animal?—in some recognizable characteristic way, and thereby given expression to ideas and ideals of its own, aesthetic and artistic as well as technical and utilitarian. And as needs change,—less perhaps because men's own desires mature, than because external circumstances change from season to season, from phase to phase of fluctuating weather cycles, of which we still know little beyond the fact of their occurrence—so do men respond to external changes, and vary the ways in which they satisfy those needs. It is, moreover, a paradox of advancement, that if necessity be the mother of invention, the other parent is obstinacy, the determination that you will go on living under adverse conditions, rather than cut your losses and go where life is easier. It was no accident, that is, that civilization, as we know it, began in that ebb and flow of climate, flora, and fauna, which characterizes the fourfold "Ice Age." Those primates who just "got out" as arboreal conditions wilted, retained their

primacy among the servants of natural law, but they forewent the conquest of nature. Those others won through, and became men, who stood their ground when there were no more trees to sit in, who "made do" with meat when fruit did not ripen, who made fires and clothes rather than follow the sunshine; who fortified their lairs and trained their young, and vindicated the reasonableness of a world that seemed so reasonless.

So too in minor matters. What seems to each generation to be the "custom of our fathers" is in continual adjustment. The rate of change varies, and when circumstances are stable—on grassland, or in forest for instance—it is very slow indeed: most rapid, on the other hand, wherever man is himself altering his surroundings, not always with intent to do so,—as for example when his goats devastate forests, or his hoeings or gold-washings choke the rivers with silt. Most of all are circumstances changed, and society shifts its shape and its contact with the earth, like quicksilver, when unwillingly, or otherwise, man finds himself with "goods laid up for many years," or even for the remainder of this one; with an accumulation, that is, of what the Greek language simply and truly described as "utilities," usable things, challenging human invention, still more human restraint, in the choice among ways of using them.

This perhaps seems over-solemn preface to the double question, how the lords of Cnossus and Mycenae acquired their wealth, and especially their gold; and what use they made of it. Ægean lands themselves have but small metallic resources: a little gold in Siphnos; plenty of silver in the promontory of Attica, but no evidence that it was worked before the sixth century; small veins of copper here and there, but so far as is at present known, no tin[85]; iron, in Seriphos, in western Crete, in Laconia, unworked however, as yet, not for want of fuel, but for ignorance of its utility, except as a hard stone for the seal-engravers (p. 434). Melos

was the Sheffield of the later Stone Age, exporting incomparable razor blades of natural glass, long after bronze was common. The other islands had their marbles and serpentine, and perhaps a few more strokes of prospector's luck, like the green porphyry of Laconia. On the other hand, gold there was in plenty in the Pangaean hills between Macedon and Thrace, accessible from the sea; a little gold in the back-country of Hissarlik; and the great gold field of Lydia, with placer washings at Sardis and up the Pactolus river, and reef mining in Mount Tmolus. But how early were any of these in use? How early, further, did Ægean peoples hear of these gold fields? Till Sardis is further excavated, we cannot be sure; hitherto, one of the most incomprehensible things about Ægean civilization is its failure to set foot on the Asiatic coast until its later phases of decline.

Gold however was in use quite early; a gold cup from the "second city" at Hissarlik; a larger one from the heart of Arcadia, of a Cycladic "sauce-boat" shape, common enough in clay; gold ornaments freely in the "second city" at Hissarlik, at Mochlos in Crete, and occasionally elsewhere; and then the amazing gold wealth of the "shaft-graves," the gold cups from the Vaphio "beehive" in Laconia; the gold signet rings, found casually, a score or more hitherto; and quite at the end of the whole Bronze Age the gold bowl and jewelry from tombs in Ægina.[86] That the gold of Mycenae was not simply loot from the raid on Cnossus, as was formerly supposed, is now clear from closer study of its place of discovery, for the "shaft-graves" were certainly closed before that event, and the fame which endured till Homer's time was not won in a day. Sole sources of great wealth, so far as our evidence goes, were war, agriculture, and slave trade. Predatory war seems precluded by the rarity of objects of alien workmanship, even from Egypt. On the other hand, if rum and molasses could buy slaves, so could oil and wine; but whither were

the slaves consigned, if the gold of Mycenae was their sale price? That there was traffic in human beings at Cnossus is suggested in the Minotaur legend, and confirmed by the clay tablets; but this only puts the question one step back; for whence did gold flow to Cnossus?

Only one kind of internal revolution, twice repeated, can be traced modifying the simple countryside régime. Near the close of the Middle Minoan period, about 1800 B.C., and again at the opening of the Late Minoan, about 1500 B.C., Cnossus, and also Phaestus, though not quite at the same moment, and perhaps alternately, acquired a predominance, certainly economic, and apparently also political, over the rest of Crete; perhaps in some degree over the Cyclades, which in any case counted for much less, once the greater resources of Crete had been exploited. Exactly how and why a Cretan "palace" came into existence is not clear; what is certain, however, is that its creation was an internal readjustment of Cretan society and culture to meet easier conditions of life, and wider opportunities for exercising the facilities which that society had won, among its neighbors or farther afield. For these "palaces" were not only the residence of a personal ruler and his retinue, nor the headquarters of a civil service. They included sanctuaries, store-houses, workshops, places of public amusement, above all, large open spaces paved or graveled for mass meetings. Of these there are fresco pictures, with the men crowded in the open air, and women looking on from upper windows and terraces, and discussing with lively gestures what they saw. The "palace" of Cnossus covers more than eight acres, and outside were villas, guest houses, eating houses, and extensive suburbs, still only partly traced. The graded avenues for traffic, and especially the outlay of the seaward and landward gates, shows that traffic was heavy, and business on a large scale. Copious records of receipts, and of certain percentages, were kept, documents were endorsed

by secretaries and inspectors; archives and valuables were officially sealed; values were reckoned for some purposes in gold units. Linear scripts developed locally from earlier picture writing. That they never wholly superseded it is a token not of incapacity, but of business haste; for it is often quicker both to write and to read a conventional sketch of an object than to spell its name in full. Greek servants today sometimes make out their kitchen bills in this kind of pictorial shorthand: on our own roads and railways, colored lights, symbolic zigzags and triangles, warn speeders, better than written placards, of dangers ahead.

One class of these documents deals, as we have just seen, with groups of men and women, much as other classes do with horses, chariots, or bowls and jugs. What this human traffic was, is not clear, but it looks like labor gangs or slave trade. In any case Cnossus, like classical Greece, had work enough and to spare; labor was certainly organized, as the whole palace system shows; and labor-hunger leads to dangerous expedients. The significance of these glimpses into a rule of force, beneath the wealth, luxury, and beauty of the Cretan palaces, is obvious already, and will reappear in another context (pp. 469–71). In any case, there was risk of reprisals. A fragment of fresco shows Negro soldiers led by a white officer; these at all events came from oversea, and from the far interior of Africa. Whether they were police, like the Thracians in classical Athens, or troops for oversea service, is not clear: but a society which cannot, or will not, defend itself, is in peril from less fastidious people. It is certain that the earlier "palace" of Cnossus did not last very long—though the accident of an earthquake disorganized it—and was succeeded by a marked revival in those smaller towns which had dwindled while Cnossus grew: and the second or Late Minoan "palace," which carried the same system even farther than the first, perished by fire and violence about 1400 B.C. after a dominion of little more than a century.

Minoan Exploitation of the Greek Mainland

To the period of the Middle Minoan "palace," about 1800–1700 B.C., belongs the Cretan exploitation of the mainland region round the gulf of Argos, the occupation of Tiryns and Mycenae, and the establishment of a dynasty whose wealth is best illustrated by its great "beehive" tombs, and by the masses of golden gear and works of art in various materials, accumulated in the "shaft-graves," dug originally close outside the citadel wall of Mycenae, though later they were included in an enlargement of it. These Cretan enterprises in Argolis effected on a more extensive scale the same kind of revolution in mainland culture, as the Cyclades had begun round the Corinthian Isthmus and in Attica, long before. But that earlier process had been checked by the "gray-ware" invasion; and when Crete took up the task, its natural line of approach was farther south, into a district where the "gray-ware" culture was already modified profoundly, as we have seen (p. 265).

Once established, Tiryns and Mycenae seem to have enjoyed continuous advancement, perhaps even greater prosperity, after the collapse of the first "palace" régime in Crete; at all events in these mainland sites there is no clear trace of that setback. With the establishment of the second "palace" at Cnossus, moreover, what had been done already in the Argive plain was repeated in Laconia, in Messenia, and in western Peloponnese. Here only the rich "beehive" tombs remain, in smaller numbers and unaccompanied by heavily fortified castles.[87] Laconia and Messenia at all events seem to have been exploited from open towns, which have left no clear traces. If, as is probable, there was still virgin forest here, the mainland "palaces" may have been built of wood. To the northward too, there was similar but less extensive occupation. In Attica the Acro-

polis of Athens was fortified strongly, but again rather late, round a stone-built "palace" of the same mainland type as at Mycenae; but at Menidi there is a late "beehive" in open country. At Thebes, quite in the interior, there was another "palace," with frescoes, and business transactions in writing as at Cnossus, and "beehive" tombs.[88] At Orchomenus, the old settlement was rebuilt and fortified, and the largest of all the "beehives" was built near by, with a carved slab roofing its side-chamber, the spirals, papyrus flowers, and rosettes of which are closely copied from tomb ceilings of the Eighteenth Dynasty in Egypt, about 1500 B.C.[89] Even in South Thessaly, there is a "beehive" of poorer construction, and rather later date, constructed unwittingly in the side of a deserted village-mound of the "painted-ware" folk, which probably was itself reoccupied by the Mycenaeans.[90]

It is not, of course, supposed that all these new settlements were directed from Cnossus; and some of the later ones, as in Thessaly, resemble more closely the later settlements in Attica, and the chamber-tombs of Mycenae itself, which are subsequent to the great "beehives." But in southwestern Peloponnese at all events, the richer contents of the "beehives" are of purely Cretan artistry, whereas much of the finest pottery of Mycenae is of a rather different and certainly local fabric.

The controversy whether the driving force in the "Mycenaean" culture originated in Crete or on the mainland, can only be settled by the discovery of fresh evidence. The difference between the Cretan "palace" architecture, adapted for mild sunny climate, with its flat roofs, light-wells, bathing-tanks, and portable braziers, and the Mycenaean "megaron"-house, with fixed central hearth in a main living room, and a vestibule with portico between this "hall" and the courtyard, is in favor of mainland, perhaps even highland habits, as we have already seen. But the mainland "palaces"

seem to be fortified against land enemies, and strategically have the sea to rearward, as if exploiting mainland provinces. The "shaft-graves" at Mycenae have long been regarded as glorified "cist-graves" like those of the Cyclades; but cist-graves are now known to be habitual in the "gray-ware" culture, and consequently this argument for oversea people falls. The great "beehive" tombs, however, have no precursors in the Ægean except the corbel-vaulted ossuaries of early Minoan Crete (p. 222), and if the "shaft-graves" of Mycenae are ossuaries rather than graves, as their mixed contents indicate, and consequently subsidiary to the places of primary but temporary interment (for which the "beehives" with their stately practicable entrances are well suited), they have prototypes in the East Cretan ossuaries of Palaikastro. The recent discovery of an unplundered "beehive" tomb at Dendra in the Argive plain, with contents resembling those of the "shaft-graves" at Mycenae, goes far to confirm this interpretation of both kinds of monument. The argument from the presence of late tomb débris under the stone threshold of the "Treasury of Atreus"—most splendid of the "beehives" at Mycenae,—to an equally late date for the whole monument,[91] proves too much; for this débris includes pottery which cannot be earlier than the twelfth century, too late for the architectural style of the façade: and as the same exploration proved extensive repairs to the threshold itself, the alternative is not excluded that these repairs were necessitated by damage done to the doorway in forcing open the burial place of an earlier dynasty for the use of a later one. But whether this Mycenaean régime was established by Cretans, or by mainland rulers under Cretan influence, can only be decided either by documentary evidence—for it is a strictly historical question—or by a contrast of breed which is not at present demonstrable among populations already so mixed (p. 47; see also pp. 381–2).

Summary of Archaeological Conclusions

We may now summarize the results of archaeological enquiry in the periods before about 1400 B.C. as follows:

(1) Corresponding with the Mediterranean immigrants, within the Ægean area, and hardly perceptible outside of Crete, the Cyclades, and a few coast districts of Central Greece, we have the "basketry-ware" culture, of wide Mediterranean distribution and North African origin, sea-borne, sea-sustained, supplemented and profoundly modified by frequent intercourse with the highly specialized civilization of the Nile Valley.

(2) Corresponding with the Armenoid immigrants, both in the Cyclades and in Crete, but with different results in each of these regions, we have elements of the "red-ware" culture, associated with the introduction of copper, and perhaps (though less demonstrably) with the spread of the cult of an Asiatic Mother-goddess. These elements are subsequent, and in Crete for the most part subsidiary; in Melos transition is clear from the "basketry ware" to the composite "gourd-types" which supersede it; and it is this composite and originative "Cycladic" culture which becomes the dominant influence in the "smear-ware" culture of the Isthmus region and the mainlands north and south of it.

(3) Corresponding with the ancient Alpine inhabitants of the Greek mainland, and highland regions north of it, we have locally specialized offshoots of the old "black-ware" culture represented in the "first city" at Hissarlik and similar early sites in Asia Minor. The resemblances between this "smear-ware" culture and the Cycladic which so profoundly influenced it are however partly due to aboriginal kinship, as the recently excavated sites in Macedonia show. But there is no evidence that the Ægean received any further

contribution from this direction, either to breed or to culture, after the establishment of the "painted-ware" cultures in Thessaly and farther south, until very much later.[92]

(4) The "painted-ware" cultures of Thessaly, above mentioned, are connected through similar local cultures in Macedonia and Thrace with the large region of "painted ware" between Danube and Dnieper, and probably are offshoots from it. That conditions were profoundly disturbed between Danube and Ægean for a long period contemporary with the establishment of these southern "painted wares" is shown by a severance of intercourse between Asia Minor and the Danube basin, after the spread of the "black-ware" culture, but before the establishment of the "red ware" at Hissarlik and in the Cyclades. This severance explains the decay of the "first city" at Hissarlik, and the failure of the "red-ware" culture as a whole to advance beyond the Marmara region, though the types of its copper and bronze implements were transmitted widely into Europe, and the "red-ware" technique more sporadically; both, however, as separate cultural elements, that is to say by trade, not by progressive settlement.

(5) The subsequent intrusion of a later type of "painted ware" with spiral ornaments, into southeastern Thessaly, is connected with the appearance of spirally ornamented "painted ware" south of the Lower Danube and also west of the Carpathians, and marks the expulsion of "painted-ware" culture from its home-land by the advance of "kurgan" folk from the region east of the Dnieper.

(6) The distribution of tumuli reveals the spread of "kurgan" folk into Central Europe, and also south of the Danube, as far as Central Greece, and across the Marmara region into western Asia Minor. The circumstances of the destruction of the "second city" at Hissarlik date this movement about 2000 B.C. and consequently synchronize it with the introduction of Indo-European speech into Asia Minor, as shown in Chapter III.

(7) In Central Greece, the appearance of the "oval" type of house indicates the arrival of a nomad grassland people, without pot fabrics of their own, within the "smear-ware" region, followed by steady spread of the "smear-ware" culture through the Greek mainland, disintegrating the "painted-ware" cultures to north and to south. Though this movement is not so precisely datable, it seems to have occurred about 2000 B.C., and consequently may be a western counterpart of the spread of Indo-European speech of the *Našili* type into Asia Minor.

(8) Within this expansive "smear-ware" culture emerge the new "gray ware" and the force which spreads "gray-ware" culture as a dominant element into southern and western Greece, and influences also oversea the later "red-ware" culture of Hissarlik III-IV. Meanwhile, the collapse of Cycladic exploitation among the mixed cultures of Central Greece, at the onset of the "gray-ware" folk, was retrieved about 1700 B.C. by Cretan exploitation of the derivative "buff-ware" culture, and the creation of the "Mycenaean" culture—with a principal center in Argolis, and later centers also along the mainland coasts both westward and northward.

(9) Associated with the "gray ware" is a fresh architectural tradition which seems to be more closely akin to the gable-roofed timber-built dwellings of the rain-washed and forested highlands than to the flat-roofed Minoan houses. It is suggested that the "megaron" of the later mainland palaces belongs also to this culture.

(10) The contemporary spread of the "gray-ware" culture northward through Thessaly was consolidating this region against intrusion from the north; at the expense however of the old "painted-ware" culture which had hitherto occupied a broad belt of country here between an Ægean and a Danubian world. Refugees carried the "painted-ware" cul-

ture into the highlands to the northwest, where it is found with local modifications, long after, in the upper Haliacmon valley (p. 459).

(11) Consequently there is no archaeological evidence that any fresh racial factor was concerned in the creation of the Mycenaean variety of Minoan culture in the Greek mainland, or in the quarrel between the Mycenaean and Cretan sections of the Ægean world, which led to the destruction of the palace régime of Cnossus about 1400 B.C. A single picture of Negro auxiliaries at Cnossus proves as much, or as little, as a single picture of a white-faced man at Tiryns, as to the breed or culture of the chiefs or their peoples. Occasional representations of golden-haired individuals, at Mycenae, and probably also at Cnossus, are sufficiently accounted for by the far earlier irruption of the "tumulus" folk (§6) into the mainland regions on both sides of the North Ægean; and prove nothing as to the arrival of any fresh racial element in the fifteenth century.

(12) There is obvious correspondence between the regions occupied in the north by the "gray-ware" culture, and in the south by its "buff-ware" derivatives, and those areas which were indicated in Chapter III as occupied by peoples speaking dialects akin, and ancestral, to Ionic, before the spread of Æolic-speaking peoples over north Greece, and Arcadian-speaking peoples from the west into Peloponnese, all in pre-Dorian times. This correspondence may be a clue to the date of the establishment of such dialects ancestral to Ionic. But before safe use may be made of it, the movements and distribution of the peoples who brought Æolic and Arcadian speech into the regions so occupied at the time of the "coming of the Dorians" must be investigated by some other means; for the extensive Minoanization of so large a part of the mainland introduced the profoundly disturbing factor of a higher material civilization aggressive in the opposite direction to the general southward propa-

gation of all kinds of Greek speech alike. But it will have been noted that the eventual spread of this Minoanization northward corresponds approximately with that of the previous spread of the "gray-ware" culture. Probably the one transformation facilitated the other, for though the higher elements in the Mycenaean or mainland-Minoan culture were Cretan, its principal bases were in the "buff-ware" province of its predecessor. Now there has been occasion already (p. 159) to examine, and provisionally adopt, the suggestion that the divergence of the Ionic group of dialects resulted from prolonged exposure of those who spoke them to a higher culture and alien speech. It only remains, therefore, to show, by any legitimate means, that Greek speech of some kind was being spoken in this region while its culture was being Minoanized, to explain this divergence of dialects ancestral to Ionic.

(13) This, however, only sets one stage farther back our investigation of the origin of such ancestral Greek speech. For if it was already spoken in the region dominated by the "gray-ware" culture, it must have been either the speech of the propagators of that culture, or that of the people among whom that culture was propagated; that is to say, of the "smear-ware" culture of the second stratum of Orchomenus, with its oval houses, and other peculiarities suggestive of a grassland origin.

Now this "second culture" appeared at Orchomenus about the same time as the destruction of the "second city" at Hissarlik, and the wide spread of tumulus burials south of the Lower Danube; and as we have already seen reason to connect those events with the propagation of Indo-European speech into Asia Minor, it becomes probable that the spread of Indo-European (that is to say, of Greek) speech into the regions north and west of the Ægean is to be associated with the "second culture" of Orchomenus, and with that "hold up" of immigrant folk in Central

Greece, by the physical obstacles of the Corinthian Gulf, and the Citheron-Parnes frontier of Attica, to which attention has already been directed.

The Next Step in Argument

We have now, however, reached a chronological period, where in addition to the contemporary Egyptian records of Egyptian dealings with foreign peoples from oversea, and of similar intercourse between the Hatti power in the heart of Asia Minor, and its neighbors on the south and west coasts of that peninsula, a quite fresh source of information begins to be available, namely the Greek traditions about that "Heroic Age" which Hesiod has so oddly intruded between his "Age of Bronze" and "Age of Iron." And there were a few traditions also about the "Age of Bronze" itself, which the "Age of Heroes" superseded.

Only when we have taken account of this other class of evidence shall we be in a position to compare the distribution of the Greek dialects (which we have been able to interpret as a sequence and superposition, but not yet to date chronologically) with the more accurate archaeological perspective of the distribution and sequence of material culture; and to link both language and culture with the historical course of events, of which we have had glimpses in contemporary documents.

CHAPTER VI

DESCENT, LANGUAGE, BELIEFS, AND CULTURE IN THE LIGHT OF FOLK-MEMORY

The archaeological materials with which we have been dealing have been evidence for the establishment, not of one but of several régimes within the Ægean basin. In the island world, the Minoan civilization of the Cyclades and Crete developed progressively and continuously, and twice obtained foothold on the coasts of peninsular Greece. On the mainland, the very ancient régime of the neolithic "painted-ware" culture was intruded into the midst of an area already inhabited and not wholly barbarous. Its intrusion only covered a certain area, and after a certain interval it was gradually superseded and obliterated by other cultures north and south of its principal domain in Thessaly. The mixed culture of the north in Macedonia and western Thrace owed little as yet—and never very much—to the Minoan régime, of which the chief center shifted southward, from the Cyclades to Crete and consequently farther away from the shores of the "Thracian sea." But the mainland regions south of Thessaly had been explored and exploited by people from the island-world almost from the first; and even that unexplained interlude, the rise and spread of the "gray-ware" culture in Central Greece, had only retarded Minoanization, and contributed to modify in some degree the cultures and outlook of all mainland provinces. Then, while this Minoanization of the mainland was still in progress, a historical event occurred, the causes of which are obscure; but its effects mark it as the beginning of a

fresh period of history. About 1400 B.C. the "palace" of Cnossus and the whole régime which it represented, was destroyed; and it is certain that, whoever destroyed it, those who directly benefited by its destruction were the Minoanized peoples of the mainland.

Now the Fall of Cnossus not only marks a crisis in the culture and history of the Ægean; it has this further importance, that it coincides closely with the appearance of two fresh sources of evidence, contemporary documents recording the dealings of Egypt and the Hatti-folk of Asia Minor with Ægean countries and peoples, and Greek folk-memory about persons and events, linked genealogically backwards as far as the generation in which Cnossus fell, and occasionally even beyond it. Consequently the method of enquiry changes abruptly at this point, as well as the supply of information.

To realize the significance of these sources of information and also the complexity and amplitude of the course of events which they reveal, it is useful to compare the principal intervals between these events with those with which later history deals. From the Fall of Cnossus, about 1400 B.C., to the traditional foundation of the great Ionian cities, a little before 1000 B.C., is as long a period of turmoil and disintegration as that which separates the destructive career of Alaric from the constructive administration of Charlemagne. And from the foundation of those Ionian cities, in what may be characterized as the "primary dispersal," to the first colonization of Sicily about 730 B.C., is as long a period of recuperation as separates Charlemagne from William the Conqueror. No doubt there were fully organized communities of Greeks in the Ægean much earlier than 730 B.C., but it is with the establishment of such a "home-away-from-home"—to paraphrase the Greek word *apoikia* for settlements like Naxos or Syracuse—that we have for

the first time proof that the "city-state" as a form of government was so far established and recognized as to be reproduced at will, wherever suitable conditions were found. Even then, however, Greek life and Greek culture were still adolescent and immature. There were yet nearly two centuries to run before Cyrus the Persian gave a new trend to Greek history by his conquest of Lydia in 545 B.C.; and more than two centuries again, before the fateful work of Cyrus was undone by the conquests of Alexander of Macedon, who died in 323 B.C. If we continue our comparison of chronologies, Cyrus stands as far from the founders of Naxos and Syracuse as Henry V from William the Conqueror; and the death of Alexander, as the accession of Charles II: or, to take more recent dates, if we synchronize the colonization of Sicily with the discovery of America, the career of Cyrus ranges with that of the Duke of Marlborough, and the death of Alexander with that of Queen Victoria.

Within the "age of transition" itself, too, between the Fall of Cnossus and the "coming of the Dorians," we are concerned with long periods. Even such a minor phase as the Pelopid dynasty lasted five generations; as long as from the Norman Conquest to Magna Charta.

Each of the periods of this age has its own place and part in the general course of events. First comes an age of distraction, conflict, and disintegration, though it includes episodes of temporary and enforced vigor under coherent leadership, such as the Pelopid dynasty already mentioned. Then, when the last ingredients of ore and flux have been added and fill the crucible, and the last load of fuel has been piled into the furnace, the noble metal of a new nationality is slowly reduced and separated, and runs out coherent into the concise mould of Hellenism.

The Fall of Cnossus and its Sequel

The Minoan civilization died hard. Indeed, in some respects it did not die at all, but after long quiescence and recuperation emerged as an element in its Hellenic successor. The shocks which brought collapse were three, successive in time, and very different in kind. The first seems to have been essentially a quarrel between the mainland settlements and the Cretan motherland, in which the new countries won, and the palace régime of Cnossus fell. But this catastrophe was attended, perhaps in part caused, by other disturbances, and these had profound effects in redistributing linguistic and tribal groups.

The second shock came ultimately from without; for the arrival of the "divine-born" dynasties was the western counterpart of a far more extensive movement of aggressive peoples, which broke down the Hatti régime in Asia Minor, and harried the coast and the dependencies of Egypt. Of its effects in the Ægean we have vivid reminiscence in the Homeric poems, and concise epitaph in Hesiod's estimate of his "Age of Heroes."

The third shock came from the highland margin of the new world created at the Fall of Cnossus and reorganized by the "divine-born" dynasties. The "coming of the Dorians" put an end, in many places, to the state of things described in the poems, and compelled wholesale emigration into regions hitherto unaffected by Minoan culture. Unlike its predecessors, it has neither documentary record abroad, for it cut off, at their source, adventures which merited this; nor contemporary memorial among Greeks, except Hesiod's wish that he were dead, seeing that he lived in the age it inaugurated. Its effects were threefold. It split Greek-speaking peoples into two kinds of political communities, managed respectively in the interest of the newcomers or of

the old populations. In language, it established the distribution of dialects which persisted into classical times. In the material arts, its influence has not hitherto been studied comprehensively, nor clearly distinguished from that of its predecessor; but there is reason to believe that its effects were profound, and more widespread than has been commonly suspected.

In between these three shocks, Greek folk-memory, if it has any historical content at all, may be expected to give at all events glimpses of successive and distinct régimes. We must however presume that each shock destroyed much and dislocated more; consequently the traditional information should become more fragmentary as it comes from farther back.

Consequences of the Fall of Cnossus were twofold. By the destruction of the palace régime, the energies and ambitions of the mainland west of the Ægean were released from an obstacle to expansion along the seaways into greater waters; and the "mainland" or "Mycenaean" variety of Minoan culture spread rapidly, to Cyprus and the mainlands adjacent to it; and also westward, at all events as far as Sicily.

The effects too on the mainland centers themselves were momentous. It is natural to expect that a transference of political initiative will be followed by transference of material culture, and even by enhancement of this. But that is not what happened at Mycenae, nor on any mainland site hitherto examined. On the contrary, the secure date-marks furnished by the pottery of Mycenaean style imported into Egypt before 1350, and the Egyptian objects of about 1400 in tombs at Mycenae,[1] prove that a marked decline from the "palace style" had already set in; considerable proficiency of mechanical and other technical processes being more than offset by the lack of originality, and even of proficiency, in design.

For this anomaly it is necessary to look for a cause; and as the material evidence, being concerned with means and results, not with ends or initiative, inevitably fails us, we have to look elsewhere for an explanation.

Fortunately, that expansion of the area, over which Ægean enterprises were now spreading, led to new intercourse between Ægean peoples and foreign centers of culture whose documents were durable and are also legible. Examples of information from such sources have been discussed already in connection with the earliest appearances of Indo-European speech, (p. 102) and of peoples bearing names of Greek-speaking tribes (p. 116). But the mere fact of widespread aggression by Ægean peoples is itself an effect, not a cause; and presumes some fresh driving force intervening within the Ægean, or in the land areas which lie behind its northern and western shores. Of such causes Egyptian and Hatti documents have nothing to say; though the sudden cessation of Hatti records a few years before 1200 is as eloquent as are Egyptian descriptions of Sea-raids and Land-raids just after that date, as to the direction from which disturbance came.

In such disturbances, the material evidence gleaned from changes in armament or costume, or from redistributions of such classes of objects, is anonymous; it is the customary usage, not the exceptional freak, that is instructive. Similarly, the larger causes of wholesale migrations—overpopulation, failure or excess of rainfall, rumors of defenseless opulence beyond a natural frontier—are impersonal, and have to be discovered, like changes of fashion, from circumstantial evidence, inductively. But between physical controls and industrial or artistic evolution stand the great episodes of such a period of instability, progressive adjustment, or catastrophic change; pioneer expeditions, predatory raids, desperate assaults, and decisive victories; and these presume leaders of military and political skill, above all of personal prowess, initiative, and that indefinable but unmis-

takable quality of "character." These men, not always "lovely and pleasant in their lives," make history, and leave name and fame behind them. It is reasonable then to ask what contribution Greek folk-memory has to offer toward the reconstruction of this period of collapse and rebirth, either in regard to detached events and personalities, or perhaps even to their historical and chronological connections.

At this point it is necessary to note that the arguments freely used during the past century of critical scholarship, to demonstrate, as it was supposed, that Greek folk-memory is useless for historical purposes, are an inheritance from a stage of historical or rather of literary study anterior to the discovery of all our archaeological material, and almost all of the contemporary documents which we have to take into account today. This is sufficient justification for referring to Greek sources of such folk-memory as though they too were revealed in recently excavated papyri or clay tablets, not in texts which have been circulated since the Revival of Learning, criticized since an early phase of the Romantic movement in literature, repudiated by most historians as sun-myth, nature-myth, or other kind of primitive philosophy, and acclaimed by anthropologists as evidence for any kind of primitive act or belief except what they apparently narrated.[2]

Greek Folk-memory of Persons and Events

The Greeks of the classical period had very copious traditions about their own early history. Of these, two main classes professed to be records of fact. There were traditions of separate events, sieges of cities like Troy, Thebes, and Œchalia; journeys of adventure, like those of Odysseus, Menelaus, Paris, and the Argonauts; the hunting of dangerous beasts, like the Calydonian boar, the Marathon bull, the Nemean lion; tales of knight-errantry and romance, the winning or capture of fair ladies, Pelops and Hippodamia,

Peleus and Thetis, Theseus and Ariadne. Some of these have plots which are found all over the world; but this does not prove them to be either borrowed or invented, human nature and human needs and perils being much the same everywhere. At most the common motive or plot reshapes the telling of the story, without affecting the question why it was told in this particular place and with this local hero. The captive hero traced by the faithful squire is a commonplace of romance; but nobody doubts that Richard Lion Heart was kidnapped by the Archduke of Austria, on his way home from Palestine, on or about December 20, 1192, and concealed in the Castle of Dürrenstein on the Danube; that Blondel de Nesle, the wandering minstrel, was a contemporary; or that English agents did so quickly learn where Richard was to be found, that they met him at Ochsenfurt on March 21.

But it is a world-wide device to account for a remarkable object or natural occurrence, or an ancient monument, or an old-fashioned ceremony, by a story ascribing its origin to a particular occasion. To distinguish therefore from this kind of "folklore," in the general sense of what the common people say, and believe that they know, about familiar objects or observances, those pieces of "folk-memory" which record something which actually happened, some criterion is necessary before any such story is admitted to have historical value. Moreover every such story deals with an isolated event. Sometimes it is possible to supply a historical background connecting a series of such events; for example, the evidence of Egyptian and Hittite documents for a political situation with wars and wanderings like those which the Homeric poems celebrate. But the events themselves are isolated, or at most are interconnected by the recurrence of the same personal names. And it is easy for the more famous personalities, such as Heracles or Theseus, to acquire credit for doings similar to their own; campaigns, giant-killings, rescues, and the like.

The other class of traditions is concerned with the relations between persons, and especially with family relationships. When the river Inachus is said to be a son of Ocean, the real relationship is not that between parent and child. When, however, the geographer Hecataeus is recorded to have traced his own family history "up to a god in the sixteenth generation,"[3] it is clearly implied that each successive human ancestor remembered what the family history was, as told to him, back to a point at which there was a break of some kind in this tradition; and probably it no more meant that there was literally divine parentage at that point, than our own references to a "family tree" mean that the bearer of the first name in it had roots and grew out of the ground.[4] Now pedigrees can be, and sometimes are, invented, to connect one family with another; and the occurrence of names of districts or natural features in a pedigree (as when we read of Cynortas son of Amyclas son of Lacedaemon son of Eurotas;—city, district, river, in succession) betrays as deliberate invention as the affiliation of Inachus to Ocean. But as long as personal names succeed each other in a pedigree, even if these names are descriptive, as many Greek names are, there is a presumption that the family itself knew what it was talking about. The personal name Eurymedon borne by an Athenian admiral, does not prove him to be mythical nor that his son was begotten by a river in Asia Minor, any more than the names of Florence and Parthenope Nightingale, or the names Alma or Pretoria in nineteenth-century birth registers, throw doubt on the existence of their bearers. No one doubts that Pericles or Miltiades belonged to an ancient Athenian clan, on the ground that Pericles' father's name Xanthippus means "yellow horse," and Miltiades' own name means "son of a red-head" or *kizilbashi*, as they call such persons in Turkey.

Now Miltiades belonged to a clan which was called the Philaidae, because the first member of it who settled in

Attica was called Philaeus, and (more fortunate than Hecataeus' sixteenth ancestor) Philaeus' pedigree went back farther through Ajax and Telamon to Æacus, and only then "went up to a god"; and again the reason was given, because Æacus came from nowhere and just "occupied" Ægina, and exploited it: whether there were other people on it then, is immaterial, if they "did not count" after his arrival. The island Pharmakoussa, off the coast of Asia Minor, was so "occupied" two generations ago by a man from Leros, and was still solely occupied, farmed, and owned by his descendants in 1916. A neighboring island, Gaidaronisi, has been similarly "occupied" rather longer, but all its inhabitants are cousins, except a few wives married from abroad. Many other modern Greek families, like some New England families, can trace not only descent but migration from one district to another, quite apart from census returns or birth certificates; and in Mohammedan countries, where the tie of blood relationship is carefully observed, there are families which trace descent back to the Saracen conquerors in the eighth or seventh centuries, as some English families do to men who came over "with the conqueror" or as Flemish weavers or Huguenot refugees. No one disputes these genealogies now, because if at any step a misstatement had been made about the new generation, it would have been detected by everybody who knew the family; all the more certainly, according as privileges, or wealth, or (above all) landed property passed from one generation to the next by birthright. For the same reason, marriage alliances between pedigree families are as carefully remembered as the matings of pedigree stock; too much depends upon the facts thus handed down, for misstatements to be possible. Thus arises a body of coherent "tradition" which among illiterate people is quite unverifiable except by its internal consistency, but is nevertheless trustworthy; for it was only transmitted at all because it was useful; and it is only useful, because each

generation which has used it has had direct experience of the accuracy of these few links in the chain which directly concerned contemporaries.[5]

Other Examples of Folk-memory

A good instance of this kind of tradition is the folk-memory of the Scandinavian settlers in Iceland. According to Sturla Thordsson, who died in 1284 A.D., the first man who wrote down in the Norse tongue, in Iceland, "histories relating to times ancient and modern" was Ari Frodi, who was born in 1067, a full generation after the death in 1030 of Snorri and Skapti the Law-man, with whom the great age of Iceland ended; and over two hundred years after the Scandinavian discovery of Iceland, about 850. Among Ari's sources were metrical dirges and other commemorative lays for particular occasions; genealogies, fortified against mistake by their metrical form, like the songs, as well as by contemporary utility; and what is described as "the dictation of old men." Ari's principal work, known as the "Book of Settlements," surveys in geographical order each separate settlement throughout Iceland, and summarizes the history of its families; and these family histories were continued, for the same practical reason, and from similar oral sources, into the thirteenth century, in Sturla Thordsson's edition of Ari's work. The conversion of the pagan Icelanders to Christianity affected these traditions not at all, because it did not disturb family life or the system of land tenure. What was affected was the higher art of commemorative poetry; and this, not so much by the spread of a new religion, as by the submission of the Icelanders to the King of Norway and the Norse Code of Law in 1262–64 and the disregard of the Norwegian treaty of Union by the kings of Denmark after the Union of the Three Crowns in 1280. But while these political changes cut off the supply of new incidents of fighting or litigation, which had been

the chief interests of the saga-man's audiences in the period of Icelandic independence, they did not prevent the collection of what already existed, by way of "histories relating to times ancient and modern" in the traditional shape which they had already; nor the transmission of them among those who looked back with affection and regret to the "good old days." The very fact that things were actually now so different, was thus an additional safeguard against misrepresentation of the past. No Crimean veteran "fights his battle o'er again" with machine guns, any more than he substitutes for the name of "the colonel" that of the war profiteer who now lives "up at the old place."

In New Zealand, the Iceland of the Polynesian Pacific, the course of events was the same, and the period of transmission was longer. When Sir George Grey went to New Zealand in 1845, one of his chief administrative difficulties was that the Maori chiefs "frequently quoted, in explanation of their views and intentions, fragments of ancient poems or proverbs, or made allusions which rested on an ancient system of mythology."[6] Further enquiry showed that what at first sight seemed to be explanatory myth was in great part historical tradition; that the traditions collected from different sources and districts were coherent; that, though in the narratives of the voyages of emigration the leaders behaved as gods rather than heroes, and worked wonders beyond the power of ordinary men, all these leaders had their recognized places in a genealogical perspective; and that it was on this genealogical tradition that authority and social order rested among the Maori of the nineteenth century. It was only when the practical utility of this folk-memory was being superseded by a new political order, and new economic conditions, that the younger men ceased to take the same interest in it as the older chiefs with whom Sir George Grey had to deal; and this, not because Christian

Maoris ceased to believe that the stories about old gods were true, but because business transactions were ceasing to depend on this kind of testimony to ownership or privilege. What conserved genealogies and other kinds of tradition now was not their utility, but their sentimental interest to those who remembered the "good old days," and the poetical value of the narratives to a man like Sir George Grey, brought up in a quite different culture with biblical and classical folk-memory of its own. The last thing, apparently, that anyone thought of doing, was to "fake" the old stories in order to bring them up to date.[7]

Applying now these notions to the folk-memory of the classical Greeks, on the lines already so fruitfully explored in Chadwick's *Heroic Age*, we find, first, that the genealogical perspective of Greek communities in classical times went back coherently as evidence for land ownership and political privilege, in the cities on the west coast of Asia Minor, to the time of their foundation, fifteen or sixteen generations before the Persian Wars, that is to say to the middle of the eleventh century B.C. In the more ancient communities of peninsular Greece the breaks come earlier, in the eleventh and twelfth centuries, and are due to political reconstruction of many districts through conquest by newly arrived people, who had their own tribal organization and closely guarded system of traditional status and privilege; and these in turn passed, like those of the conquered, into a fresh genealogical perspective from the moment that the newcomers settled down as owners of newly acquired lands. That we know as much as we do about this genealogical scheme of the first five centuries of adolescent Greece, is due, as in Iceland and Polynesia, to the circumstance that when the new commercial and industrial revolution of the seventh and sixth centuries had gone sufficiently far, and hereditary land ownership was giving place to ownership by

contract and purchase, the sentimental, aesthetic, and eventually historical value of these traditions of descent, and the picturesque incidents and characters which they enframed, led to the collection and collation of them by Hecataeus, Acusilaus, Pherecydes, and other compilers of a literary *Book of Settlement*, like that of Ari Frodi in Iceland, or the *Polynesian Mythology* of Sir George Grey, at "the dictation of old men" whose learned talk would otherwise have died with them, because it had lost its utility in daily life.

Among these later genealogies, that of the Spartan kings has attracted special attention, less for its obvious historical importance, than because it is considerably shorter than the period which it should fill, as estimated by Eratosthenes and other persons, more experienced than we in genealogical enquiries. As told by Herodotus, backwards from the Persian Wars, the pedigree of Leotychides, who belongs to the generation of 500 B.C., only reaches 980, when we reckon thirty years to a generation, whereas the standard date for the "coming of the Dorians" was 1104 at lowest.[8] But it has to be observed first, that in this list we are not dealing with generations but with reigns,[9] and secondly that the Spartans postponed legal marriage till the age of 40. Now if we add the difference between 30 and 40 years to each generation of the list, the initial date is at once raised from 980 to 1140, more than enough to bring the list into conformity with standard chronology.

It has recently become fashionable to refer to the "coming of the Dorians" as a period rather than an event. The same fashion would make sad havoc of the documentary evidence for the "coming" of the Vandals or the Saracens or the Ottoman Turks; and for the Dorians ancient folk-memory was precise, that their "coming" was not only so many generations before the Persian Wars, but a century after an unsuccessful attempt to reach Peloponnese by way

of the Isthmus. The "coming" of the Zulu into Natal, and of the Matabele into Mashonaland, each took place within a single generation.[10] Where there was prolonged opposition, as at Corinth, the precise position of the invaders' temporary camp outside the walls was still known in the fifth century.[11] If there should turn out to be a misfit at Sparta between pedigrees and potsherds, the remedy is to look for the Laconian equivalent of the Solygeian Ridge.

Connecting the new Hellenic societies of the eleventh century with the old were fairly numerous family traditions. Some families had not been disturbed; that of Cypselus at Corinth, for instance, was of "Lapith" origin, and the "Lapiths" had fought the wild "horse-folk" in the days of Theseus, about 1230. Others, though they had been driven from one district to another, kept pride in their place of origin and famous ancestors—like the family of Pisistratus, at Athens, who were "Neleids from Pylos" descended from Nestor, who "fought in the War" against Troy, a century before their move. Others, again, had acknowledged status and special privilege in their new homes oversea, by reason of their prestige "in the old country," like that other Neleus, who was recognized as founder and first ruler of the new settlement at Ephesus, because his father Codrus had been king in Athens. Similarly there were descendants of Agamemnon in Lesbos: the Gephyraean clan at Athens, to which Harmodius and Aristogeiton belonged, were Cadmeians, originally from Thebes: the family of Isagoras, the political rival of Cleisthenes, worshiped a Zeus who was not Olympian but "Carian"; and in Homer Carians do not speak Greek.[12]

Even if, here and there, an upstart or an adventurer claimed an origin which he could not prove, on arrival in a district to which he did not belong,—or if a writer of fantasy or comedy made absurd genealogies for fun, like those in the *Battle of Frogs and Mice*, or our own use of "Norfolk

Howard" for the minor horrors of vagrancy, this only proves that in ordinary life people were assumed to know their genealogies, and stand by their accidents of birth. Only an outlander and an oaf like the Cyclops took Odysseus seriously when he said that his name was "Nobody." The proper retort was that there was nobody of that name.

Conversely, in cities which had no long history, pedigrees were not long. That of Gelo for example goes up not to a "divine-born," but simply to the "man from Telos," a neighbor "in the old country" to the Lindian founders of Gela[13]—as the Hertfordshire Putnams were to the Lincolnshire founders of Boston. This was sufficient patent of nobility in a Sicilian city, for it put Gelo on the same footing as everyone whose ancestor had "pegged out his claim" when Gela came into being.

Where the "genealogies" of Hecataeus stand, then, in relation to the sixth century and its economic revolution, the *Catalogue* of Hesiod and the two Homeric epics stand to the thirteenth and twelfth with their dynasties of "divine-born" kings. Whatever the details of the process may have been, Herodotus seems to describe essential fact, when he says that "Homer and Hesiod made the gods for the Greeks," about four hundred years before his own time, that is to say about 850 B.C. For in the same sense Homer and Hesiod made also the "age of heroes" heroic, as Ari Frodi made the heroic age of Iceland, at "the dictation of old men," with just such a wealth of folk-memory at command, as is the background of the clear-cut personalities and well defined social order of the Homeric world. That there were minor discrepancies, among Greeks of the classical period, as to the central dates for the "Trojan War," was only to be expected, seeing that the dates for the War were reckoned back through the disturbed episodes of the coming of the Dorians, when many old families were scattered, and sons succeeded their fathers prematurely, as happens in war

time.[14] These discrepancies are however only of importance as proof of the general interest in those events. In view of the general Greek consensus that there was such a series of events, and of the limiting conditions (as we are now discovering them) of such folk-memory, they are negligible; and the great work of Eratosthenes, in establishing a standard chronology of early Greece, stands side by side with the establishment of a standard Homeric text, as one of the high achievements of Alexandrian research, when once more all things had been made new by Alexander and his generals. In what follows, Eratosthenes' outline of chronology will be followed, for convenience of comparison, and outlying incidents and personages will be dated, in accordance with it, to the nearest generation in the more celebrated pedigrees, such as the pedigrees of Nestor, of Œdipus, of Pelops, and of Priam at Troy.

By this diagrammatic standard, then, let us estimate the historical context of this kind of folk-memory, reconstructing the social framework of the early age of Greece. If the result is coherent, it must be so for one of two reasons, either amazing ingenuity among the sixth-century chroniclers—in which event, we have still to ask how they knew on what historical assumptions to proceed—or a living, accurate folk-memory of ancient times. And if the result coheres also with sources of information quite beyond the knowledge of those chroniclers, the conclusion seems unavoidable that Greek folk-memory was historically trustworthy; that it enables us to explore aspects of Greek antiquity for which we have not yet other evidence, and, in particular, to select the right localities wherein to look for such evidence, as Schliemann selected Troy and Mycenae, and Sir Arthur Evans selected Cnossus.

The only difficulties in this procedure arise from one or other of two causes. One is general, and common to all early pedigrees, namely the frequent discrepancy of age between

husband and wife, which sometimes affects the synchronism between two families, sometimes not.[15] That its effect is not uniform is not necessarily due to carelessness; in modern documentary pedigrees the same discrepancies result from strict conformity to facts. The other cause is more special, a break of gauge, so to speak, between distinct groups of pedigrees, and especially between the new dynasties which appear in the thirteenth century, and the families which go farther back.

The Short Pedigrees of the "Divine-born" Dynasties

As Hecataeus' genealogy went back sixteen generations, and then "went up to a god," so the great families of the "age of heroes," which was terminated by the "coming of the Dorians" usually "go up to a god" in the third generation before the Trojan War.

Achilles son of Peleus, and Ajax son of Telamon, are grandsons of Æacus, and Æacus is son of Zeus.

Odysseus son of Laertes is grandson of Arcesius, son of Zeus.[16]

Idomeneus son of Deucalion is grandson of Minos, son of Zeus.

So in Phaeacia, Laodamas son of Alcinous is grandson of Nausithous who "goes up to a god," Poseidon, and in this case it was remembered that Nausithous came down out from "Up-country" and founded Phaeacia on its island, as Æacus came from nowhere and inhabited Ægina. Sometimes the pedigree goes one generation further, but when this happens, it is because the place of origin of an immigrant grandfather was known. Diomedes, for example, son of Tydeus who came into Argolis from Ætolia, was grandson of Œneus; and it is his father Portheus who "goes up to a god" and is a son not of Zeus but of Ares. Compare with this the pedigree of the House of Atreus. Agamemnon and Menelaus are sons of Atreus, grandsons of Pelops, who was

in some sense a Phrygian, and a newcomer in western Peloponnese; and Pelops' father was Tantalus, a prince of Lydia, and son of Zeus. Or there is a crisis in the history of the family; Hector, son of Priam, is grandson of Laomedon who came down out of the hills, like Nausithous, and built Troy in the lowland; above Laomedon however, there are four more generations, Ilus, Tros, Erichthonius, and before them Dardanus, who first came into the hill-country, and was a son of Zeus; and it is in this interval that the pedigree of Æneas son of Anchises comes in, for Anchises, son of Capys, was grandson of Assaracus, son of Tros, and consequently Æneas was Hector's fourth cousin. Here we have a double pause,—at the founding of Troy by Laomedon, two generations before the Trojan War, and at the establishment of Dardanus in the hill-country, four generations earlier. And it will be observed that while the later of these pauses, the coming of Laomedon to Troy, is in the same generation as the coming of Pelops the Phrygian into Peloponnese, the earlier is in the generation of other great founders, Cadmus and Hellen. To this earlier pause we must recur later.

These pedigrees of the greater heroes of the "war-generation" fit well enough together; Atreus for example married Aerope, granddaughter of Minos, and first cousin of Idomeneus, who is a contemporary and ally of Atreus' sons; Odysseus' wife Penelope was second cousin to Helen, wife of Menelaus; Pelops, grandfather of Agamemnon, married Hippodamia, first cousin of Œneus the grandfather of Diomedes; and so forth. But they do not fit so well with those of heroes whose families have a longer history. Nestor, for example, though he "fought in the War," was an older man than Agamemnon or Odysseus, and was respected accordingly: and one of his sons, Pisistratus, was a suitable, if rather older, companion for Odysseus' son Telemachus. Though Nestor's father Neleus had come into western

Peloponnese in the same generation as Pelops, his ancestry, like that of his contemporary Laomedon, goes up four more generations to Hellen in the generation of 1400. Similarly Odysseus pays to Alcinous the respect due to an older man, as well as to his host, but he is expressly represented as rather too old to be challenged at games by Alcinous' sons: he stands, that is, between two generations in Phaeacia. Tlepolemus, leader of the contingent from Rhodes in the war, had been driven into exile by the "sons and grandsons" of Heracles, two generations cooperating;[17] and the varied exploits and matrimonial affairs of Heracles himself bring him into contact with two successive generations: he too stands, as it were, on a half-landing.

The short pedigrees of the "divine-born" dynasties, with their occasional revelations of foreign origin, one generation farther back, give us information of the first importance; namely that three generations before the Trojan War, and therefore five generations before the "coming of the Dorians," large districts of Greece fell into the hands of adventurers, of whose origin little was known, except that one of them, whose family was eventually paramount, came from abroad about 1260, and was in some sense Phrygian: and that it was in the same generation, about 1260, that Laomedon built and fortified Troy. That these dynasties, like that of Laomedon, were of foreign, that is to say of non-Greek origin, is clear from their almost invariably foreign names, which have resisted ingenious and sometimes discrepant attempts, ancient and modern, to make them into Greek words:—Pelops, Atreus, Thyestes, Agamemnon, Menelaus; Arcesius, Laertes, Odysseus; Æacus, Telamon, Ajax, Peleus, Achilles; Priam, Hecuba, Hector, Anchises, Æneas.

Now it was in 1272[18] that the great treaty of peace and mutual friendship was made between Egypt and the Hatti-folk, in view of some new danger threatening both; and it was in the reign of Laomedon, that Priam, then a young

man, led his father's contingent to help the Phrygians at the great battle on the Sangarius river, against the "Amazon folk."[19] It was a very great array; Priam never saw anything like it except Agamemnon's forces deployed under the walls of Troy. Without the historical context, it was permissible to ascribe this vivid picture of the régime of the "divine-born" dynasties to poetic imagination. With it, we are justified in using the Homeric poems as a storehouse of coherent folk-memory about a real phase in the making of the Greek world and its people.[20]

But with the "divine-born" dynasties came other adventurers out of the western highlands of Greece itself. The family of Diomedes has Greek names throughout, and goes up to a god, but to Ares not to Zeus. Part of this clan remained in Ætolia, where Diomedes' uncle Meleager called back kinsmen and friends from the south for the hunting of the Calydonian boar, about 1230; and from this Ætolian branch the Perseid chief Tyndareus won his wife Leda, who was also a granddaughter of Ares.

There were also allies or vassals, bound by obligations of service to the paramount House of Atreus, such as the family of Nestor, whose father Neleus, of Æolid ancestry, had come into western Peloponnese in the same generation as Pelops about 1260 and had severe troubles with the children of Epeius and other descendants of Endymion, whose father likewise had come out of Ætolia into Elis about 1360.[21] Epeius too, was "divine born," but his father was Poseidon; and this whole group of clans, which includes also the family of Ætolus, namesake of Ætolia, "goes up to a god" namely Zeus, in the generation of 1400. To these and other west-country clans we shall have to return (p. 336); noting only, here, those other examples of exodus from the west-country, the "divine-born" family of Odysseus, which reached the western islands about 1260, and the contemporary Phaeacians farther off still. Here too there were

troublesome neighbors, Taphians and Teleboans, with the latter of whom there had been a serious war about 1230, calling for help from as far afield as Thebes.

Whatever value we may assign to contemporary Hittite references to his namesake Attarissyas of Ahhiyava in Caria, Pamphylia, and Cyprus, we can appreciate the significance of the marriage of Atreus son of Pelops the Phrygian newcomer, with Aerope, granddaughter of Minos and cousin of Idomeneus; for Minos had founded a "divine-born" dynasty in Crete about 1260, and according to Greek folk-memory had "driven the Carians out of the islands" and made the sea-ways safe. To the end of the same generation, again, belong the voyages of the Argo, which visited Libya and the Adriatic, as well as the Pontus. Laomedon, too, in the same generation as Pelops and Minos, had not only a new fortress at Troy but a fleet; for he ruled over islands, and used them to intern persons of whom he disapproved.[22] How recent these dynastic conquests were, and how incomplete in detail, even after the War, is seen from Menelaus' invitation to Odysseus, through Telemachus, to leave Ithaca and settle near himself:—"I would found him a fort and build him houses. . . . sacking some one fort of the folk who live around and are ruled by myself." We almost hear Roger of Sicily calling to Robert of Normandy, and planning a razzia on "paynim men, my vassals though they be."

The "Trojan Catalogue" and Its Historical Background

Within this general situation, details are supplied in abundance both by allusions in the narrative portions of the Homeric poems, and by the two *Catalogues* or metrical gazetteers which are incorporated in the second book of the *Iliad*. So long as it was unknown that there was a "sixth city" at Hissarlik newly refortified in the thirteenth century; a historical Asia, with an important city Troia, in rear of the

Hatti empire in Asia Minor; a historical Achaean sea-king making war and peace in turn with the Hatti government at Boghaz-keui, and historical Achaeans joining the Libyans in a raid on the Delta in 1221, within a few years of the Argo's voyages—it was excusable that folk-memory so intimate and detailed should be mistaken for poetic invention, and that the accord of the *Catalogues* with the Homeric narrative should be explained by learned compilation at some later date. But that phase of literary criticism is superseded, even in the present imperfect state of our historical and archaeological knowledge. Reconstruction now begins not with Homer but with history. The *Iliad* and the *Odyssey*, whatever their date in the form in which we have them now, rest on a coherent and trustworthy foundation of folk-memory, and give vivid and copious illustrations of a historical Achaean world.

The Trojan *Catalogue* is the simpler in construction. After enumerating the home district of the Troad, it follows the three seacoasts which meet at the Hellespont. First comes the north coast of the Ægean, reached by the ferry between Abydus and Sestus, both included in the "home district" for obvious military reasons. Somewhere hereabouts lived actual Pelasgians;[23] then come Thracians, in the wide Hebrus valley; then Cicones under Mount Ismarus, and Paeonians bounded by the "eddying Axius," who in the sixth century had been pushed back to the Strymon watershed by the Macedonians.

Then follows the north coast of Asia Minor, omitting historic Bithynia because, as Herodotus knew, the Bithynians were Thracian immigrants, and in Homer the Hellespont "restrains" Thracians to Thrace. This section ends at Alybe, the "birthplace of silver," beyond the Paphlagonian hill-country, whence Mithradates afterwards drew the sinews of war. Finally, down the west coast of Asia Minor, lie the Mysians and the Phrygians, the Maeonians in what

was afterwards Lydia, the Carians, and the Lycians "as far as the Xanthus river," excluding therefore the mountainous home of the Solymi against whom Bellerophon had fought, two generations earlier.

Two points only need comment here, the position of the Phrygians, and the absence of Lydians, so conspicuous later. Phrygia in historic times had no Ægean coast; on the other hand, it included the central plateau as far as the Halys river, and bordered on upland Cilicia. In the *Iliad* there were Cilicians, Andromache's people, in the Troad, and it was only in Priam's young days (traditionally therefore about 1250) that he led his father's men in the Phrygian force that fought the Amazon folk on the Sangarius river, the middle course of which is followed by the great highway from the Marmara region onto the plateau. This "Amazon war" had other Asiatic episodes, in which Heracles and Theseus respectively were concerned, and a great counter-attack into Europe; later, times had changed, and an Amazon contingent came to help Troy, but not till the last year of the siege.[24]

Amazon stories were also current in Greece about two other regions. North and east of the Black Sea they seem to be told of a nomad horse-riding people, the women of which rode and fought like the men—as indeed they must at need, in such communities. Whether the men were beardless like the women is a question which would be more easily answered if we knew when the first Mongols broke loose from the high plateaus onto Eurasian grassland. In South Palestine, again, round Ascalon, there was a beardless people in the sixth century, perhaps a remnant of the great raids of northern nomads in the seventh, the beginning of the end of Assyria. But in Asia Minor in the thirteenth century there is no evidence of anything of that kind. There was, however, the very obvious contrast between the clean-shaven people on earlier Hatti monuments and in Egyptian

war pictures, and the full-bearded folk who replaced them at Carchemish about 1100, and are represented on later monuments in North Syria, and other countries formerly "Hittite."

Now a Hatti document (about 1330) refers to a district somewhere to the northwest called Assuva in which was a city called Taroisa, apparently not under Hatti dominion. The district name is the only clue hitherto found to the origin of the name of Asia, which was certainly still applied to a lowland and therefore probably maritime district in early classical times; and the name of the city is closely equivalent to that of Troy itself. Of its relations with the Hatti régime we know nothing further directly; but the great treaty between Hattušil II and Rameses II of Egypt, in 1272, not only closed a long period of hostility in mid-Syria, but explicitly settled all outstanding difference there and enabled both parties to turn their attention elsewhere. What the new danger was, is evident from Priam's memory of his martial youth, when the whole Phrygian force went up the Sangarius river against a beardless enemy; from the other strokes and counter-strokes of that "Amazon war"; from the sea-power of Laomedon, who not only fortified Troy, and bred war horses, but ruled over islands and would intern people there; a "horrible man," as one of his Homeric victims says.

But what had begun as concurrent enterprises, of Phrygians and Trojans in the northwest, and of the Phrygian house of Pelops and other newcomers in the southwest, in the Minoanized and non-Minoanized halves respectively of Ægean coast lands, came to cross-purposes more than once; in the first Trojan War, between Laomedon and Heracles, in the generation of 1260–1230; and in the second, due to the misbehavior of a namesake of Alexander of Ialysus. To the circumstances of the capture of Helen we must return later, after examining the *Catalogue* of Agamemnon's allies in the same way as this Trojan *Catalogue*.

The "Achaean Catalogue," and Its Geographical Background

It has been noted already, that like the Trojan *Catalogue* the *Catalogue* of Agamemnon's allies, in the *Iliad*, gives almost a gazetteer of the regions of peninsular Greece and its dependencies. The list is in three distinct sections, each arranged on a different plan. First come the mainland contingents, beginning with Boeotia, and then traced round in a roughly spiral sequence conformable to the course of the sun, to west, to north as far as Locris, just south of the Spercheius valley, then to east as far as Euboea, then south round Peloponnese to west, where the Arcadians having no sea coast are appended to the men of Elis who transported them in their ships, and so on to the island barony of Odysseus, which included Leucas. The omissions of this section are as instructive as what it includes. Corinth and the north coast of Peloponnese have no independent existence but are in the back-country of Mycenae. There is no southern Locris; east of Ætolia, in fact, the whole Corinthian gulf is ignored, and the same ignorance appears also in the *Odyssey*, on two separate occasions. Most significant of all, not only is there no Doris, but the townships included in historic Doris are not included in any other district, as Corinth and its neighbors are gazetted under Mycenae. It looks as though in the northwest Agamemnon's writ did not run. It is noteworthy, on the other hand, that in the omitted districts Mycenaean remains have not yet been found, whereas they are known in all the others except in Arcadia, and in Locris at the far north end; even in far-away Phocis there are traces at Anticyra and at Delphi.

The second section surveys the islands, beginning with Crete, and sweeping round "against the sun" through Rhodes and the coastal islands as far north as the Calydnian

islands, Calymnos and the group which spreads north of it to Patmos. Here too the correspondence with the range of Late Minoan settlements is instructive, and the omission of the Cyclades, where it was only in Melos that anything seems to have survived of the earlier importance of this group. With this, too, other Homeric evidence concurs. Ajax was wrecked making a short cut through these islands, on the way home from Troy, and Delos in the *Odyssey* appears, in a deliberately elaborate compliment paid by a traveled man, not as a place of common resort but as a far country where a palm tree stands by an altar of Apollo. But while the Cyclades are remote, Cyprus is well known. Elsewhere it is mentioned that Agamemnon's breast-plate came from friend Cinyras in Cyprus, and there was a later story to explain why Cinyras sent no contingent as he was expected to do; and as we too should expect, in view of Attarissyas' operations down there, and of the adventures of the Argive hero Bellerophon, a generation earlier still. It was only after the Trojan War, however, that tradition placed the revival of Achaean enterprise in those coasts, in the settlements founded by Calchas in Cilicia, and by Teucer in Cyprus.

The third section of the *Catalogue* deals with Thessaly, on a larger scale, and in greater detail, but after the description of a few coherent baronies on the southern coast, the towns are not grouped by geographical neighborhoods, and two, Oloosson and Dodona, are outside the region, to north and west respectively, along the lines, however, of principal passes and routes. This has been attributed to carelessness or ignorance on the part of the poet, but seeing that Mycenaean remains occur only on a few scattered sites, and (except one tomb in the southeast) are of unusually late period, it is just what is to be expected, in a country only partly exploited. Local annexations are grouped under the names of their actual lords. No one disputes that the Duke

of Devonshire holds also the great fief of Hartington, or the Duke of Norfolk that of Arundel in Sussex, on the ground that their territories are discontinuous. There were wild people about in Thessaly still, half man, half horse, as the Spanish cavalry were thought to be by the Mexicans; people with great knowledge of wild herbs, and (as we have seen) high-bearded round-eyed faces; but they could teach heroes to ride and sing the old songs, if they pleased. Moreover the greatest of these Thessalian baronies, the kingdom of Peleus father of Achilles, was traditionally founded in this very way; Peleus who belonged to the "divine-born" family which held the island of Ægina, carved it out for himself, planted his own people there, and lost his "divine-wrought" sword in the process; and Achilles himself, in great need, prays to Zeus of Dodona as his special patron. The Thessalian appendix to the Boeotian *Catalogue* has therefore historical significance.

So too have the legends about Cretan and Euboean settlements, in the Trojan War generation, farther north still, on both sides of the gulf of Salonica. They are at the same time precursors of the Euboean colonies of very early historic times, and the counterpart to that rather late Mycenaean exploitation which is revealed by the foreign pottery in Macedonian settlements a day's journey or more from that gulf. For here too, as in Doris and all the west of Central Greece, there was a "no man's land." The Thessalian *Catalogue* ends at Oloosson, on the pass over to the Haliacmon valley; but Priam's confederacy has its frontier on the Axius river. What it was that separated them is not stated; but later Herodotus knew that the Dorian conquerors of southern Greece had formerly "lived in Pindus" the mountain watershed of the peninsula, "and been called Macedonian"; and as the traditional date of their arrival in Doris is fixed to the generation about 1200 by the adoption of the son of Heracles by their old chief

Ægimius, they were evidently believed to be already in occupation of this district in Agamemnon's time; which sufficiently accounts for the omission of Doris and its townships from the *Catalogue;* perhaps also in part for the tattered condition of the Thessalian baronies.

The Longer Pedigrees

Behind the familiar world of the "divine-born" dynasties, the eleventh book of the Odyssey presumes acquaintance with an older régime, of which other Homeric passages and later Greek folk-memory retained many details, and several important episodes and political dynasties.[25]

Of these dynasties, that of the "sons of Æolus" is at the same time the most fully described, and at present the only one to which there is contemporary reference, in Hatti documents. The general conformity among the pedigrees does not stop with the arrival of the "divine-born," though it is only here and there that earlier families are set out in detail. Nestor's ancestry goes up to Æolus in the generation of 1360; that of Glaucus from Lycia, through Bellerophon, also to Æolus, in the same generation; that of Tyndareus father of Helen, again to Æolus on the side of his father Perieres, though his mother, the Perseid heiress Gorgophone, through whom he came to be king of Sparta, has a different and much longer ancestry, which will concern us later. The first two of these Æolid pedigrees are of Homeric authority; later there is mention of others, and the common ancestor Æolus was described as "son of Hellen." This accords with the Homeric recognition of Hellenes collectively—"Pan-Hellenes" in the Phthiotid district of south Thessaly—and with the spread of these Æolid houses from this part of Greece; and forces us to recognize between 1400 and 1360 a crisis of disturbance, superficially resembling that of the generation of 1260, though its source and distribution were quite different, as we shall see. This crisis too was not

confined to Æolids or Hellenes; for we shall see that it coincides in date with the coming of Dardanus into the Troad, of Cadmus into Boeotian Thebes, and the establishment of an older Minos, son of Cadmus' sister Europa, in Crete. It also immediately follows the reestablishment of order at Argos after the great killing of the sons of Ægyptus by the daughters of Danaus, and also, quite independently, the establishment in Attica of the dynasty of Pandion which ruled continuously down to the generation of the Trojan War, and was powerful enough to keep out, or turn out, not only the "divine-born," but Boeotian, Thracian, Amazon, and Cretan intruders, on various occasions to which we must attend in due course.

As the destruction of the "palace" régime at Cnossus is dated archaeologically to the generation of Amenhotep III, who was king of Egypt from 1414 to 1365, a fact quite beyond the knowledge of Eratosthenes, or any Greek of historic times, this crisis or pause about 1400 in the longer pedigrees is a clue to be followed carefully, especially in view of Thucydides' belief that the spread of "Hellen and his sons" through peninsular Greece was due to "other cities bringing them in to their aid" from an original home in south Thessaly where they had "grown strong." What were the causes of this need for military help?

Three pieces of folk-memory mark this "coming of Hellen and his sons" as an episode in a period of widespread disturbance and readjustment. The first records the establishment of a new dynasty in Crete. The second describes the coming of Cadmus into Boeotia, and links it with this new Cretan dynasty. The third recounts the coming of Danaus and Ægyptus to Argos, and the great massacre of the "sons of Ægyptus" which followed. Each of these must be examined separately in its historical context; together with the few other pedigrees which go up to the generation of 1400, or beyond it.

Traditions about "Minos King of Crete" fall into two groups, and this distinction was appreciated in antiquity. In the Homeric poems Minos is the grandfather of Idomeneus, who "fought in the War": his brother Rhadamanthys was "fair-haired"; and was alive after the foundation of Scheria by Nausithous, for he was carried by a Phæacian ship to Euboea. Both were Zeus-born and their mother was a "daughter of a red man," Phoenix,—not necessarily a Phoenician, unless Achilles' red-headed friend was a Phoenician too. Rhadamanthys, after death, was translated to Elysium where Menelaus was to join him later; Minos however went to the same "House of Hades" as other Homeric chiefs. But the Parian Marble distinguishes from this Minos an earlier personage, dated to 1432, and Greek folk-memory made this Minos a "Zeus-born" son of Europa and nephew of Cadmus, whom the Parian Marble dates to 1519. The significance of the high dates in the Parian Marble must be reserved for discussion later. For the moment it is sufficient to note that its date for Hellen, 1521, is only two years above that of Cadmus, and that for Danaus, 1511, only eight years later. The Parian Marble, that is, uses the same genealogical data as other authorities, but spaces its generations farther apart. The discrepancy is like that between two maps of the same district drawn on different cartographical projections; one distorts bearings and distances more than the other; but intelligent travelers find their way equally well on either.

Of the Cadmeians of Thebes we only know that they were distinct in descent and culture from the people whom they found in Boeotia; that they introduced writing there; that they arrived about 1400, not like Æolids or Hellenes from farther north, but from oversea; that while they were essentially confined to Thebes, they nevertheless had other settlements in Thera and Thasos, and were thought to be both "red-skins" and mariners, and also in some way con-

nected with the new dynasty established in Crete about the same time. It was also, according to Herodotus, the Cadmeians who drove the ancestors of the Dorians northward from the country "under Ossa and Olympus" into the highlands of Pindus north of Thessaly. The significance of this statement will be better appreciated, when the Hellenic pedigree itself has been examined in its turn. All this looks as if the Cadmeians were people of Minoan culture who occupied the Minoan "palace" on the Cadmeian hill, which was the citadel of historical Thebes, and used the "beehive" and "chamber" tombs in its slope. If, as the pedigree suggests, they only arrived about 1400, they were not the builders of the "palace" and tombs, but only its reoccupants; for the "palace" at Thebes goes back to the beginning of the Late Minoan period.[26] Minoan script has been found there of a local style, and of rather late period, inscribed on vases apparently of local make; and a similar find is recorded by Plutarch,—a document inscribed on lead, from a chamber tomb at Haliartus, venerated as that of Alcmena, mother of Heracles. The destruction of the Cadmeian power at Thebes in the double wars with Argos between 1230 and 1200, is sufficient reason for the Homeric *Catalogue's* silence about Thebes itself (though it mentions a "lower town," Hypothebai), and for the long list of small towns in Boeotia;[27] and this omission of a city so important both before and later, is strong evidence for the *Catalogue's* historical value.

Unlike the "divine-born" dynasties, the great families or clans of the "longer pedigrees" never seem to have come under any single rule like that of Agamemnon. The concordance of their pedigrees is therefore the more notable, though the difficulty of reconstructing the general state of the region is greater; and for this period even such Homeric evidence as there is gives only glimpses into a bygone age.

Very Long Pedigrees at Argos, Athens, and Orchomenus

Very few pedigrees go back beyond the generation of 1400 without supplementing personal names with those of mountains, rivers, or districts symbolic of local affinities. But those which do go farther are noteworthy. The first of these, and simplest, is that of the Perseid house in Argolis.

Penelope, and Helen, both heiresses, were great-granddaughters of Perseus, who was "divine-born" in the generation of 1300, and in some sense founder of Mycenae. His mother Danae, however, was daughter and heiress of Acrisius king of Argos, whose brother Proetus "founded" Tiryns in the generation of 1360, or 1330 if we make allowance for the overlap of the lives of Perseus and his grandfather. Abas the father of Acrisius had survived a great slaughter, about 1400, of the "sons of Ægyptus" by the "daughters of Danaus," in whose name, as in that of Danae, we have an echo of the "Danauna" Sea-raiders of the thirteenth century, and of the Homeric use of the name "Danai" as a general term for the armed forces of Agamemnon.

Behind this crisis, and the generation of Danaus and Ægyptus themselves, stands their father Epaphus, "divine-born" in Egypt in the generation of 1500, and therefore contemporary with Thothmes III. Then comes another long line of kings, back to Phoroneus son of River Inachos son of Ocean; and Phoroneus' generation is that of 1760, though later Greek reckoning placed it 1100 years before the first Olympiad, that is to say in 1876. What is instructive, here, is Greek belief (only imperfectly appreciated by Waldstein a generation ago) that in the plain of Argos there had been (1) a long dynastic sequence, before the "coming of the Hellenes"; (2) a crisis of intercourse with Egypt, dated to the reign of Thothmes III, who had actually an official

entitled "governor of the islands"; (3) a great killing of the "children of Egypt" by Danaan women, about 1400, and therefore about the time of the Fall of Cnossus; (4) a new start made at Tiryns about 1330, and at Mycenae about 1300; the latter also by a "Danaan" adventurer who had made good in the Levant, as the story of Andromeda and the crocodile shows; (5) marriage of the heiress-daughter of Perseus and Andromeda to an Æolid adventurer from the northwest about 1260; and (6) another change of dynasty when her granddaughters Helen and Clytaemnestra married respectively Menelaus and Agamemnon, sons of Atreus the Pelopid, in the generation of 1200.

In view of the representations of valuable works of Minoan craftsmanship among the tribute offered by foreign peoples to Thothmes III, and of the gold cup inscribed as a gift to that king's "governor of the islands" (p. 119), this Greek memory of Egyptian intervention of some kind in Argolis, and of the massacre of "sons of Egypt" which ensued, is noteworthy, though its precise significance cannot be recognized yet.[28] On the face of the story, *somebody* belonging to Argos wandered to Egypt at a time when Egypt had Minoan tributaries. About 1430, descendants of that *somebody* returned, followed by Egyptians. This Egyptian interference was ended by a massacre of Egyptian men by "Danaan" women forcibly mated to them, like the women of Lemnos afterwards. Abas, the heir of the sole survivor of the massacre, bore the name of a people who were still inhabiting Euboea about 1200, and "fought in the War"; and he founded in Argolis in 1400 a dynasty which with sundry accidents lasted till about 1260, when it was replaced by an Æolid family. That the Argive massacre should so closely synchronize with the establishment of new dynasties in Crete, Thebes, and (as we shall see presently) in Attica, and with fresh settlements in Thera, Thasos, Lindus in Rhodes, and Lycia, can hardly be accidental: nor that it

should be in the same generation that Cnossus fell, and "Lykki" and "Shardana" began to harry the coasts of Egyptian provinces; quite a different kind of people from the oversea tributaries of Thothmes III.

Secondly, there are the royal pedigrees of Attica, only preserved in outline (if it be true that their initial date was at 1796 B.C., 1020 years before the first Olympiad); and reducible still further into four main periods, with the help of Herodotus, who distinguished (i) a primitive "Pelasgian" phase, (ii) the régime of Cecrops, (iii) that of Erechtheus, which made the population of Attica to be "Athena's people," and finally (iv) the "coming of Ion to be their war lord," which made them "Ionian." Family history, however, in the strict sense only goes back to Erechtheus.

The great national hero Theseus sailed in the Argo, and received the aged Œdipus from Thebes; he therefore belongs approximately to the generation of 1230, though he carried off Helen as a girl, and his mother Æthra has somehow become associated with Helen in the *Iliad*.[28a] By the common account, it was he who broke the dominion of Minos the Cretan sea-king over Attica and its neighborhood, and unified Attica politically. He was also concerned in the Amazon war, and in repelling a raid of the "horse-folk." Before Theseus came Ægeus (1260), then Pandion (1300), then Cecrops in 1330, and the common story made Ion (in the generation of 1300) to be the son of Xuthus son of Æolus and of Creusa, sister of Cecrops and daughter of Erechtheus.[29] Before Erechtheus, and consequently in the generation of the Fall of Cnossus, comes an older Pandion, whose father Erichthonius, at long last, is a "divine-born" son of the Earth and Hephaestus, and introduced the horse into Attica, and the four-horsed chariot: and Pandion's wife was Zeuxippe, a lady of the same sporting taste. Earlier than this, there are only the names of founders of dynasties, with symbolic or descriptive names, Amphictyon, Cranaus, Ery-

sichthon, and then the more historic figure of an earlier Cecrops, in whose days the cult of Zeus Polias was established, the great contest occurred between Athena and Poseidon for the patronage of Attica, there was an Aonian invasion out of Boeotia, and there were Carian pirates on the seas. This was all in the generation of 1560 (1582 by the Parian Marble, 1557 by the same reckoning adjusted to the war-date of Eratosthenes) and slightly before Deucalion's flood and the first Hellenic occupation of Phthia thereafter (which the Parian Marble puts about 1500). Beyond this earlier Cecrops, even Attic folk-memory had nothing but symbolic names.

What is noteworthy in this group of legends is, first, its diagrammatic character before the time of Erechtheus and Pandion, contemporaries respectively of Æolus and Hellen; secondly, the well-marked crisis, even earlier than this, in the days of Cecrops I, about 1560; thirdly, the total absence of any such break about 1260 as results elsewhere from the intrusion of "divine-born" kings, but a reorganization of Attica with the help of "Ion the war lord"; fourthly, positive repudiation of the sovereignty of one of those kings, the later Minos, and more reforms about 1230; fifthly, the sequel (perhaps even the result) that Attica took but little part in the Trojan War, the national hero Theseus having been recently driven into exile by Menestheus, Agamemnon's ally.

Characteristic also of Attic folk-memory is its reduplications. There are two appearances of Pandion, two of Cecrops, two versions of the story of Ion, possibly two liberations from a Minos, since the Parian Marble assigns a "*Minos prior*" to 1437 and Eratosthenes to 1407; two dates for Deucalion's flood, at 1800 and 1500. The latter, conformable with the Parian Marble (1529–1504), is not far from the Argive date at 1530, but both are earlier than the genealogical date of 1430 which results if Deucalion was the father of Hellen.

Of these duplications the most important is that of the Cretan oppression, the only direct link with the regional history of the south. Falling in so closely as it does with the archaeological date for the Fall of Cnossus, and also with the sequel to the coming of Danaus and Ægyptus from oversea, it deserves attention; and the variant stories of the adventure of Theseus, preserved by Plutarch, include graphic details,—the betrayal of the fleet, the surprise attack on the palace, the fight in the great gateway—which look like folk-memory. But if so, we have to be prepared for a virtual duplication of Theseus, perhaps also of Ion, if this was when he "came in to help" and organized the population of Attica in the "four Ionic tribes."

The Minyan Pedigree at Orchomenus

A third very long pedigree is that of the Minyan dynasty at Orchomenus. It is of the utmost importance, because two members of it, Andreus and Eteocles, have been recognized by Forrer in a Hatti document as assailants of Hatti dependencies in the generations of 1360 to 1330; they are there described as Æolian. That they were not Æolian in the sense of being "children of Æolus," is clear from the pedigree itself; for Andreus is there described as son of the Peneius river. There is the further complication of a symbolic Orchomenus son of Minyas, later in the pedigree, to whom personal descendants are assigned whose dates place Minyas in the same generation as Athamas and Andreus. The pedigree has therefore been put together wrongly, out of two lines, and probably three, of collateral family descent, one of them Æolid, the other two autocephalous, though not specifically "divine-born." But it can be reconstructed.

In the Homeric *Catalogue* the contingent from "Minyan Orchomenus" is led by Ascalaphus and Ialmenus, "divine-born" sons of Ares and Astyoche daughter of Actor

son of Azeus. Here the Homeric pedigree ends, without explaining the connection between this family and its Minyan home. Pausanias supplies the connecting link: Azeus, he says, was brother of Erginus, father of Trophonius and Agamedes, builders and wizards, who built a treasure house, closed by a single stone, for Amphitryon father of Heracles. This puts Trophonius into the generation of 1260 at earliest, and he may have been a generation later, as Erginus was part-contemporary with Heracles. The ancestry of Erginus goes up through Clymenus and Presbon to Minyas, who also had a diagrammatic son Orchomenus. If Erginus belongs to 1300 or 1260, this puts Minyas back to 1400, or 1360.

But here difficulties arise. Another version made Orchomenus a "divine-born" grandson of Danaus (through Isione and Zeus), which would put Orchomenus back to 1400, and make the foundation of the town range with the Fall of Cnossus and the coming of the Hellenes. Minyas too was a "divine-born" son of Poseidon and Chrysogeneia daughter of Almus, whose ancestors are Eteocles, Andreus, and the river god Peneius. If this pedigree be set out as it stands, it puts Andreus back to 1500, at latest, and to 1530 if we allow a full generation for Chrysogeneia. But the same Pausanias says that Andreus acquired Orchomenus (six generations before its namesake) and gave it to Athamas, a well-known Æolid of South Thessaly in the generation of 1330. There is a clear discrepancy of two hundred years.

The explanation lies in the circumstance that Almus had another daughter Chryse, whose "divine-born" son by Ares was Phlegyas, namesake of the Phlegyae, men of wrath who went south into Phocis, and raided Delphi, and on another occasion attacked Thebes. Since another story made Presbon a son of Athamas, it seems probable that both Minyas and Phlegyas, namesakes with symbolic mothers, have been supplied, like Orchomenus, to connect Andreus, Eteocles, and Almus, with an Athamantid family in the "Minyan"

city. A "child of gold" indeed it seems to have been, to judge from its magnificent "beehive tomb," a replica of which Trophonius was supposed to have made for Amphitryon at Thebes, while his own oracular "cave" at Lebadeia may well have been another. If Andreus was a contemporary of Athamas, he belongs to the generation of 1330; Eteocles therefore to 1300, Almus to 1260, which would make him a younger contemporary of Erginus in the Athamantid line.

So it is clear that this pedigree has been edited, at two points, and that the reason was a double tradition as to the holders of Orchomenus from 1330 to 1260. It would explain this double ownership if we could discover why Andreus "handed over" Orchomenus to Athamas the Æolid. If for example, Andreus had other dominions, and Eteocles likewise, a viceroyalty at Orchomenus would explain everything. Meanwhile, all we know about the origin of Andreus himself is that he is "divine born" from, or from beyond, the river Peneius; and as this river flows north of the domain of Athamas we discern a newcomer moving through that domain, acquiring Orchomenus, and entrusting it to his vassal while himself going farther. In dealing with this odd incident in central and northern Greece, it is well to remember that in the generation of 1360, which is that of Erechtheus, Attica was much troubled with "Thracian" intruders; and Attica lies considerably farther south of the river Peneius than either Orchomenus or the domain of Athamas.

The régime of Andreus and Eteocles at Orchomenus ends however with the latter personage; and the grant to Athamas lapsed in the disasters of his unhappy family, one branch of which went oversea, as the name of "Hellespontus" testified, and the other was extinguished. This lapse explains why the ruler of Orchomenus in the generation of 1300 is Amphion, whose daughter was Nestor's mother, and who was himself a "son of Iasus"; but it is not yet clear what this Amphion or his father have to do with their better known

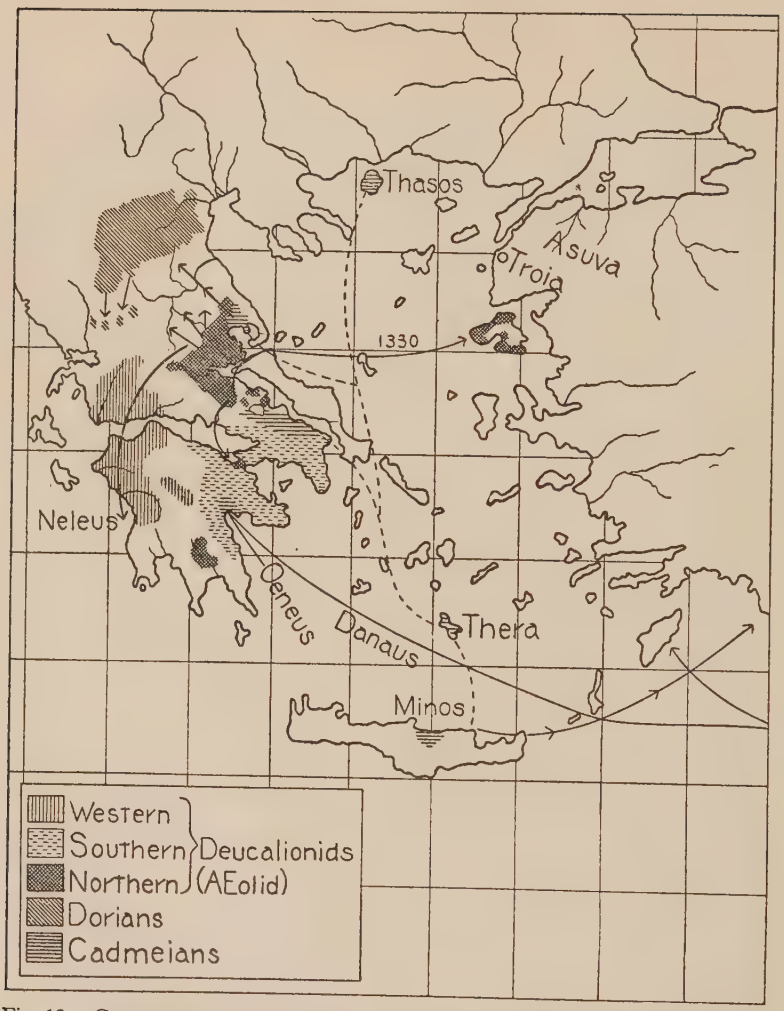


Fig. 12.—Geographical Distribution of certain Peoples in the Fourteenth and Thirteenth Centuries B.C. inferred from Greek Folk-memory.

namesakes in Thebes and Argos respectively. The Asiatic Iasus, founded before the Neleid colonization of Miletus, may be one of the outposts of Achaean sea-power, on the coast of Caria.[30]

There are special reasons for careful examination of this Minyan pedigree, in view of the uses to which both this and the Minyan name itself have been applied in recent years; and also because its own anomalies indicate exceptionally complicated circumstances at a site of exceptional significance, geographic, strategic, and political.

The Coming of the Sons of Æolus

We may now reconstruct some part of the political situation in peninsular Greece, at the time of the spread of the "sons of Æolus." (1) About 1400, a new dynasty had been established in Crete, by Minos who was "son of his mother," like any Lycian; which is the more important since his brother Sarpedon "after a quarrel" established himself in Lycia, at a time when (according to Herodotus) the people of Crete did not yet talk Greek. (2) Related to this Cretan dynasty, and himself an alien from oversea, was the founder of the Cadmeian régime at Thebes, which lasted till the wars with Argos about 1200: and there were other Cadmeian settlements in Thera and Thasos. (3) In Argolis, also about 1400, the "daughters of Danaus," remote descendants of an old local family, had returned from oversea; there had been also forcible incursion of "sons of Ægyptus" from Egypt; but there had been a great massacre of the "sons of Egypt" by Danaan women, and the sole survivor (who bears the same name as a people which was still in Euboea in 1200) founded the dynasty commonly called Perseid (with chieftains at Argos, Tiryns, and eventually Mycenae) which lasted till the coming of the Pelopids and their West-Greek associates. (4) In Attica, Pandion son of Erichthonius established about 1400 a dynasty which was overthrown by a popular movement about 1200, the leader of which, Menestheus, was an ally or feudatory of Agamemnon; he belonged to the house of Erectheus but his father had been expelled. (5) Across the sea, Dardanus, some of

whose tribesmen maintained the Dardanian name in Thrace till classical times, and others on the Hellespont, established himself in the foothills of Mount Ida. Troy, though an important place before 1300, did not fall into the hands of Laomedon till about 1260.[31]

Into this distracted country came the "sons of Æolus" between 1360 and 1330; occupying Thessaly as far north as the Peneius, and parts of Central Greece as far south as Orchomenus and Copais, where their general advance was held up by the Cadmeians, though Sisyphus reached Ephyra (which may be Corinth) about 1330. Rather later, Neleus, who had held Orchomenus as dowry of Chloris daughter of Amphion, moved to Pylos in the west of Peloponnese. If Amphion of Orchomenus was also the builder of the walls of Thebes, his counter-attack on Orchomenus falls into series with the Phlegyan attack on Thebes after his death, i.e., about 1260; for the "sons of Phlegyas" were cousins of the "sons of Minyas."

There was good reason therefore for Eteocles of Orchomenus to be described as an Æolid (*ayavalas*) by the Hatti scribes, for his career falls precisely in this generation of Æolid expansion, and it was to an Æolid, Athamas, that his father Andreus had granted Orchomenus.

But who were these Æolids? Here we encounter four further extensions of early genealogy: *first*, the current description of Æolus as son of Hellen, *secondly*, the ascription to Hellen of other sons besides Æolus, *thirdly*, the description of Hellen as son of Deucalion, who therefore falls, with his flood, and place of refuge on Parnassus, into the generation of 1430; and *fourthly*, the ascription to Deucalion of other children besides Hellen, and the identification of personages and peoples who were afterwards certainly believed to be Greek, as descendants of these other "children of Deucalion."

Hellen and His Sons

Of the traditional family tree of "Hellen and his sons," it can only be noted here briefly (1) that while the threefold partition of the family in Hesiod's time into Æolians, Ionians, and Dorians fits very well the three main regions of colonization on the coast of Asia Minor, each with its respective group of Greek dialects, it does not fit at all so well the distribution of kindred dialects in peninsular Greece; (2) that the later inclusion, by Hellanicus, of Achaeus as a fourth "son" (or rather grandson) of Hellen results partly from the necessity of accounting for the so-called "Achaean" colonies of Magna Graecia, partly from the recognition of a closer relationship of the older population of the Achaea in North Peloponnese (which was the motherland of those western colonies) with the ancestors of the Ionian-speaking Greeks, than with either Dorians or Æolians; (3) that the affiliation of the Ionians themselves to the Hellenic family was obscure, precarious, and variously explained; more especially as it was believed that Attica only "became Ionian" rather late, though it had (as we have seen) a much longer perspective in its folk-memory than most parts of Greece; (4) that the affiliation of the Dorians to the Hellenic family was complicated by another notion, that they came into Greece from the north, and late. Consequently there were alternative theories; either the Dorians were not originally Hellenic, but had to be recognized as such on account of the distinguished part played by Dorian peoples in Greek history; or else, if they were Hellenic, it was necessary to explain how other peoples, popularly accepted as Hellenic, were so different from most Dorians, and in particular had been in Greek lands so much longer. For there are hardly any traditions about Dorians until the generation of 1200, and even their Heracleid leaders only go back to Heracles, between 1260 and 1230.

We are now in a position to discuss the generic name, *Hellas* and *Hellenes*, by which the Greeks of the fifth and sixth centuries described themselves and their motherland, and trace it back toward its origin. In its eventual and most inclusive sense, it is a comprehensive term for all Greek-speaking peoples; and it is in this sense that, in the diagram of Hellenic descent as revised by Hellanicus in the fifth century, the common ancestor of all Greeks, Hellen, has in addition to the three sons, Æolus, Dorus, and Xuthus, a daughter Xenopatra, the "clan of strangers"; for there were by this time Greek-speaking peoples of too uncertain descent to be included in any of the three recognized groups, yet sufficiently "children of Hellen" to be given this courtesy-rank "on the mother's side." Earlier authorities, as we shall see, were not so scrupulous, for they knew of inhabitants of Peloponnese who were descended from Deucalion, but not through "Hellen and his sons."

From the name of the managers of the Olympic festival, *Hellenodikai*, it is clear that there had been a time when only genuine Hellenes were allowed to take part in that festival. That among Greeks in the most general sense there were some who were regarded as being in a more special sense Hellenic, seems to follow from the special use of the phrase "great Hellas"—the Latin *Magna Graecia*—for the group of South-Italian colonies which came from the shores of the Corinthian gulf, and for the most part from its south side, the country later called Achaea, but described by Menelaus in the *Odyssey* as "Hellas" when he proposes to escort Telemachus homeward that way.[32] This colonial usage helps to explain the early vogue of the Olympic festival, as a homing-point for people from those western colonies; and it was clearly this group of colonies which enforced the inclusion of the "Achaean" name for a chief subdivision of the Hellenes, alongside of Æolian, Dorian, and Ionian; in specially close relation moreover with

the Ionian name, symbolized by the insertion of the symbolic Xuthus—the "brown man"—as their common father in the national pedigree. For it was only in the threefold classification of the Hellenic settlements in Asia Minor, that the main dialect groups were geographically contrasted neighbors; and in the west there was a similar group of settlements, similarly coherent in situation and dialect, but clearly not included in any of the conventional three.

Farther back than the establishment of these "Achaean" colonies in the west, we have, to guide us, only the Homeric association of "Pan-hellenes and Achaioi" in the district of Phthia in South Thessaly; the use of "Achaioi" in the Homeric poems as one of the general names applicable to Agamemnon's whole force; the later belief that in some sense "Hellen and his sons grew strong in Phthia"; and now the repeated use of the name "Ahhiyava" in Hatti documents for an aggressive Ægean power in the fourteenth and thirteenth centuries, and of "Akhaiwasha" in Egyptian documents of the thirteenth and early twelfth, for one of the "sea-raiding" peoples. Greek genealogies, the value and significance of which are now apparent, give precision to this whole conception of the "Hellenes" as a newly active folk in North Greece, by tracing numerous later families up to Hellen in the generation of 1400, through Æolus in that of 1360. Pedigrees going up to Dorus are rare, and of late transmission; sometimes it is only through symbolic names, tribal or topographical, that the generation of Dorus himself is pushed back to that of Æolus. In Homer, there are only "Dorians" in one passage about the peoples of Crete, and Ionians only once, in a context which may merely mean Athenians, and in any case only refers to a single tribal contingent from Central Greece in Agamemnon's army. The personal Ion belongs at earliest to the generation of 1300, perhaps rather to that of Theseus (pp. 325–6).

It seems to follow, that to use either "Hellenes" or "Achaioi" only for the "divine-born" kings and their personal "comrades," is to leave out of account both the evidence of the pedigrees, and the contemporary Hatti references to an "Ahhiyava" earlier than the "divine-born" generation of 1260. Yet if there were "Achaeans" in Greek lands of earlier date than this, there is no one with whom to identify them in accordance with Homeric folk-memory except the "Pan-hellenes" of Achaea Phthiotis, and other Hellenes emergent from it; and no one in the genealogies can be securely affiliated to a "Hellenic" stock except the great Æolid houses who converge on a personal namesake in the generation of 1360. The eventual occupation of Orchomenus by Æolids, by the "children of Minyas," and by the new dynasty of Andreus and Eteocles, adventurers from beyond Peneius, raises a question which is obscured in later versions of the Hellenic pedigree. Was Hellen the only son of Deucalion? Or rather, were "Hellen and his sons," who settled first in Phthiotis, the only Greek-speaking tribes who emerged from the Parnassian highland after the "great flood"?

Other Descendants of Deucalion

Among extant genealogies, two at least supply an answer, often overlooked, and also an important supplement to our very limited knowledge of western Greece. And this as we have seen is a region of the greatest importance for the interpretation of events elsewhere, because it was certainly the proximate source of the Doric- and West-Greek-speaking tribes in later times, and probably also of the Arcadian-speaking.

First, the family of Diomedes, who "fought in the war" goes back, not to Hellen at all, but to his contemporary Orestheus, another son of Deucalion. This family only abode in the west-country till the generation of Œneus grand-

father of Diomedes, who was a contemporary of Pelops the "Phrygian," and (like Pelops) a soldier of fortune who made good in Peloponnese. It also includes the names of Ætolus, Pleuron, Calydon, the latter being tribal names, like Thermon, Ophion, Acarnan, Eurytan, of a form characteristic of the region. That these are not merely symbolic is indicated by the place-name Œniadae which clearly means "children of Œneus"; and an earlier Œneus was father of Ætolus. As the wife of Pleuron was Xanthippe, daughter of Dorus, in the generation of 1330, we have here one of the few circumstantial corroborations of the Hesiodic pedigree in which Dorus is brother of Æolus; and also a hint that this group of Deucalionids was at that date within reach of the "children of Dorus," who in that generation were not yet in the west-country, but in the highlands of Pindus, on the far north border of Thessaly, as Herodotus says.

Secondly, Deucalion had a daughter Protogeneia. Her name is symbolic enough, but her offspring are not. Aëthlius, Zeus-born, went "west-about" to Elis, and his son (about 1330) is Endymion.[33] Among Endymion's descendants are Epeius, some of whose descendants seem to have been later in North Greece as well as in Elis; and Eleius, the latter a "divine-born" son of Poseidon, not of Zeus. Other Epeians seem to have strayed into (or remained in) Central Greece, for they are brigaded in the *Iliad* with Boeotians, Locrians, Phthians, and Ionians. Endymion is also father of Ætolus, in the same generation (and probably in the same symbolic sense) as Ætolus is son of Œneus; so that in two independent versions the Ætolians are descended from Deucalion otherwise than through Hellen.[34] They seem to have broken back into Ætolia, as the Matabele and probably also the Angoni "broke back" from the rest of the Zulus in Natal.

These rare fragments of a more spacious folk-memory indicate that the Hellenes of South Thessaly, of whom the "sons of Æolus" are the only well authenticated groups,

were not the only members of the Greek-speaking "family," and in particular that other "sons of Deucalion" can be traced moving "west-about" from the north side of Parnassus, occupying Ætolia about 1300, and entering West Peloponnese in the generations of 1300 and 1260, that is to say heading the movement which is popularly connected with the adventurer Pelops; while those who did not move south, but remained in Ætolia, kept up communications with these more aggressive kinsmen, and could count on their help in such emergencies as the Calydonian boar-hunt, in the generation of 1230, or in the war with the Taphians and Teleboans, in the same generation.

One other line of Deucalionids remains to be considered. Attic folk-memory, as we have seen, went back with a coherent genealogy from Theseus to Erichthonius in 1430, who was divine-born but also earth-born, and—most significant of all—introduced horses and four-horse chariots into Attica. Above this there is a break; but immediately above the break comes Amphictyon son of Deucalion. The name of Amphictyon is symbolic, but also significant, in view of the later use of the word to denote the participants in the venerable cult of the Earth-mother at Thermopylae. These participant tribes cover the region from the north and west borders of Thessaly to Phocis, Boeotia, and an "Ionia" which is not easy to locate, but certainly is not the colonial region oversea. Now there is reason to suppose (p. 157) that the Ionian-speaking region of peninsular Greece once extended north of Attica and west of Euboea, and that its later restriction resulted from the southward spread of Æolic-speaking people. The genealogical evidence for the spread of the Æolids, and the documentary evidence for "Æolian" adventurers oversea, identified with the men who ruled Orchomenus while the Æolids were spreading, give us the date for an important stage in this encroachment of Æolic speech. The Cadmeian intrusion at Thebes, whatever

its origin and character, had at all events the effect of stopping that encroachment temporarily; and if the Cadmeian rulers were as foreign as tradition describes, they probably had as little effect on the language of their subjects as the eventual distribution of dialects shows. Further, tradition was explicit, that it was here that a foreign script was first employed *to write Greek*, presumably by persons who despaired of making Boeotians learn anything else, but needed to communicate with them. It is the familiar predicament of a superior culture attempting the exploitation of a region of alien speech; just so, we find the Greek alphabet adopted by Slavs, the Roman by Teutons, the Arabic by Turks, the script of China by the Japanese, cuneiform script by Cyrus and his Persians; all in more or less simplified forms, as in Herodotus' description of "Cadmeian letters.[35]

That the date assigned to Deucalion in Attic tradition is two generations higher than in the pedigrees of Hellen and other Deucalionids is itself evidence that genuine folk-memory is in question. Nothing was easier or more tempting than to put the Deucalionids of Attica into their normal place, if common knowledge had not precluded this. This common knowledge is represented in the first place by the pedigree of Athenian kings which ran back to Pandion in 1400 and Erichthonius the chariot-driver in 1430, a generation earlier therefore than the Cadmeian occupation of Boeotia. What was remembered, evidently, about the pre-Cadmeian and pre-Erichthonian régime in Central Greece was that Attica ranked with other Amphictyonic participants in the cult of Demeter, and in whatever political régime was its secular counterpart. And as the genealogical date for Erichthonius shows, this status of Attica was quite independent of, and did not result from, any local flooding of the Copais, or any descent of Deucalionids thereafter from Parnassus. In so far as it represents a movement of

peoples or chieftains at all, it is to be correlated with the beginning, not the end, of that deluge. And at this point we have to note the tradition that "in the days of Cecrops" there had been places called Athenae and Eleusis in the Copais, which were submerged by "Deucalion's flood" and never retrieved. That this reference is not to Cecrops son of Erechtheus, about 1360, is clear from the Hellenic and other pedigrees which go back to Deucalion's return from high altitudes. It therefore refers to the older Cecrops, whom the Parian Marble assigns to 1582 while assigning the beginning of Deucalion's reign to 1574, the Deluge to 1529 and Amphictyon to 1522. It is to be observed however that while the Parian Marble's other dates for early events are rather higher than those reckoned in the present argument from extant genealogies, the date for the older Cecrops is in accord with them, and consequently stands closer by a century to the generations before and after "Deucalion's Flood" than in the genealogical scheme provisionally proposed here. It is separated from them moreover, in other versions of Attic folk-memory, by a whole period or dynasty which the Parian Marble ignores.

Retrospect and Summary of Genealogical Evidence

Thus the traditional genealogies of the classical Greeks, breaking off as they do, in groups and "going up to a god" at three different points, reveal three principal crises in this transitional period. The latest, about 1100 B.C., is identified in folk-memory with the "coming of the Dorians" into Peloponnese. The second, about 1260, is characterized by the coming of "divine-born" chiefs of unknown origin, and also by the coming of other chiefs who were not "divine-born" and whose human ancestry went back farther, but in some other district, like Nestor and Diomedes. Thirdly, the genealogies of the "sons of Æolus," the "sons of Endy-

mion," and perhaps also the "sons of Minyas," point to a yet earlier movement out of Thessaly, about 1360. Before this there are only a few longer genealogies, of the Cadmeian family at Thebes, the Danaids and Perseids of Argolis, the "strong house of Erechtheus" in Attica. But among these, the Cadmeians came in from oversea about 1400, the Athenian pedigree breaks off with Erichthonius about 1430, and the Danaids reach Argos from abroad, also about 1430. As the "sons of Hellen" (of whom Æolus is the only one with early pedigrees attached to him) came likewise into folk-memory about 1400, and as this generation is that of the Fall of Cnossus, there is good reason to believe that they all refer to real occurrences connected more or less directly with that event.

We are now in a position to take stock of the historical content of these family histories.

(1) The pedigrees of Hecataeus, of the Neleids in Attica, and of the Spartan kings, indicate a violent crisis in the eleventh century, and much displacement of peoples. The cause of this disturbance, was (by common consent) the "coming of the Dorians" into the south, and a similar and rather earlier movement which redistributed the Æolic-speaking peoples of Thessaly, pushing some of them farther south into the area where the Cadmeian dynasty had maintained itself down to the disastrous wars in the generations of 1230 and 1200.

(2) The régime which was destroyed, in most parts of Greece, by the "coming of the Dorians" was that of the "divine-born" kings who had established themselves five generations before, about 1260. A similar dynasty had founded Troy about the same time, after previous sojourn in the hills; and the leading dynasty in Peloponnese was in some sense Phrygian, though not necessarily from Asiatic Phrygia.

(3) Central incidents in this period were the great quarrel between the Houses of Atreus and Laomedon, involving their vassals, interrupting their predatory and exploratory voyages, and leading to post-war disorders at home.

(4) Other leading events are the two wars, slightly earlier, between Argos and Thebes, the exploration of the Black Sea, Libya, and the Adriatic by the Argonauts, the Amazon Wars, the Athenian rejection of Cretan dominion, and the political reorganization of all Attica by Theseus. The personal career of Heracles is of less significance than the existence already, before the Trojan War, of the strong group of his "sons and grandsons" who expelled Tlepolemus to Rhodes.

(5) Parallel with the "divine-born" dynasties, great and small, there are the western sea-powers of the Phaeacians, Taphians, and Teleboans. That of Phaeacia was founded at the same time as the "divine-born" dynasties in Greece, by people from the highland interior.

(6) Sufficiently numerous pedigrees go back beyond the crisis of 1260, to establish another widespread break in tradition, another group of fresh leaders and presumably of fresh tribes, in the generation of 1400. This crisis closely followed the "great killing" of the "sons of Ægyptus" by Danaan women. It was very near in time to the "early Minos" in Crete, and also to the mission of Rhadamanthys from Crete to Lycia to establish ordered government there. It was also closely followed by the rise of the Perseid house in the plain of Argos, and fresh importance of Mycenae and Tiryns. It resulted in the spread of the "sons of Æolus" over northern and southwestern Greece, marrying into the older families. Genealogically Hellen, father of Æolus, belongs to the same generation as Cadmus, Pandion, Abas the sole male survivor of the seed of Ægyptus, and perhaps Minyas, in whose issue at Orchomenus there may have been a Danaan strain.

(7) Attica, which had escaped a "divine-born" dynasty of the later series, has its own break of continuity about the same time as the establishment of the House of Cadmus at Thebes, but quite apart from it.
(8) Of yet earlier crises there are traces, in the Attica of Cecrops about 1550, in the Argolis of Phoroneus about 1750. Beyond these, no folk-memory seems to have been preserved at all.
(9) Some confusion has arisen as to the initial date for the establishment of "Hellen and his sons" in South Thessaly, through the different local identifications of "Deucalion's flood."
(10) The effective "coming of the Hellenes," however, only begins with the spread of the "sons of Æolus" in the generation of 1330: and in this generation falls Andreus of Orchomenus, a contemporary of Athamas the Æolid.
(11) Only in Attic genealogy is there early trace of "Ion and his people," and then only tacitly related to Hellen as a grandson of Æolus, with a purely diagrammatic father and brother. The Athenian contingent at the war was however in some sense "Ionian" and had a distinctive dress.
(12) Similarly there is little confirmation of the link between Hellen and Dorus. But as the Dorians were driven northward into Pindus by the Cadmeians, they must have been somewhere south of Pindus—the story puts them "below Ossa and Olympus," in northeastern Thessaly—after the generation of 1400, which is that of Cadmus and Hellen. Also a "daughter of Dorus" marries an eponymous Pleuron son of Ætolus in the generation of 1360. But Pleuron's pedigree is one of those which go up to Deucalion otherwise than through Hellen; and this version of Deucalion (in the purely West-Greek pedigree of Augeas and Eurytus), places him in the generation of 1400,—as a collateral therefore of Hellen, not his father,—and it is accompanied with other anomalies, which there seems to have been no ancient attempt to explain.[36]

B. C. 1500	1460	1430	1400	1360

ATTICA:

"Parian Marble" dates:

1549–1497

1557

HEPHAESTUS / GE ..... Erichthonius ..... Pandion I ..... Erechtheus

Deucalion ..... Amphictyon[1]

Cranaus[1]

Erysichthon[1]

Cecrops I[1]

Xuthus

Dorus[6]

Hellen

Aeolus[7]

Deucalion

Canace / POSEIDON

ZEUS ..... Protogeneia / Aëthlius / Calyce[4]

Orestheus ..... Phytius

Aetolus / Pleuron / Xanthippe[5]

NB. Brackets to right connect brothers.
Brackets to left connect parents.
Numerals identify persons who appear in more than one pedigree.
Small letters connect husband and wife.

DIVINE-BORN DYNASTIES OF NEWCOMERS:

LONG PEDIGREE OF PERSEIDS AT ARGOS:
Fragmentary pedigree in Herodotus ii. 98.

Achaeus ..... Phthius ..... Archandrus / d. of Danaus

(*Eight generations more, to Phoroneus, 1760.*)

Sthenelus ..... Gelonor

Epaphus (*Son of Io and Zeus*) ..... Aegyptus ..... Lynceus / Danaus ..... Hypermnestra ..... Abas ..... Proetus / Acrisius

First four places illustrate "myth" (p. 299) *Lelex* ..... *Eurotas* ..... *Lacedaimon*[7] .....
Alternative Aeolid pedigree, probably genuine ..... Aeolus .....

TROJAN PEDIGREE: ZEUS ..... Dardanus ..... Erichthonius .....

CADMEIAN PEDIGREE:
Diodorus iv. 167; v. 59

Agenor ..... Cilix / Cadmus ..... Polydorus / Europa / ZEUS ..... Minos I .....

Another version: Diodorus iv. 60.

Deucalion ..... Hellen ..... Dorus[6] / Aeolus[7] / Orchomenus (childless) / Presbon

ORCHOMENUS:

Eteocles (q. v.) ..... Almus ..... POSEIDON / Chrysogeneia / Chryse / ARES ..... Minyas ..... Phlegyas ..... (to Phocis) .....

A separate pedigree, wrongly prefixed to Almus: PENEIUS R. ..... Andreus .....

B. C. 1500	1460	1430	1400	1360

Fig. 13.—Selcted Genealogies Preserved in

1330	1300	1260	1230	1200 B. C.
Cecrops II	Pandion II	Aegeus	Theseus	Demophon
Orneus			[Peteos	Menestheus
Creusa	Ion			
Tectamus[9] (*m. d. of Cretheus and went to Crete.* Diod. IV. 60.)				
Xanthippe[5]			ZEUS	
Sisyphus	Glaucus I	Bellerophon	Laodamia	Sarpedon
	Ornytion	Phocus		Glaucus II
Perieres (*v. below*)		Thoas	Damophon	Propodas
Athamas	Phryxus	Cytissorus	Alcestis[2]	
	Helle	Pelias	Acastus	Borus
Salmoneus	ENIPEUS Tyro[3]		Nestor	Thrasymedes
		Neleus	Pero	Pisistratus
		Bias		
	Amythaon	Melampus	Antiphates	Oicles
		Melampus		Amphiaraus
Cretheus[8] Tyro[3]			Mantius	Polyphides
				Theoclymenus
				Clitus
	Pheres	Admetus[2]	Eumelus	*still living*
Calyce[4]	Aeson	Jason	Eunēus	*still living*
Aloeus	Epopeus (*to Sicyon*)			
POSEIDON Eurycyde	Eleius	Actor	Eurytus	Thalpius
			Cteatus	Amphimachus
Endymion	Epeius	Augeias	Agasthenes	Polyxenus
	Paeon		Phyleus	
	Aetolus	Pleuron	(*N.B.—Threefold accommodations.*)	
Oeneus I	Aetolus	Pleuron	Agenor	
	ARES Demonice	Thestius	Althaea	Meleagrus
Agenor			Leda[6] Tyndareus	Helena
				Clytemnestra
ARES Harpinna	Portheus	Oeneus II	Tydeus	Diomedes
	Oenomaus	Hippodameia	Atreus Aërope[1]	Agamemnon (b)
				Menelaus (a)
ZEUS	Tantalus	Pelops	Thyestes	Aegisthus
		Niobe	Pittheus	
	ZEUS Antiope	Amphion		
	ZEUS	Aeacus	Telamon	Ajax
			Peleus	Achilles
	ZEUS	Arcesius	Laertes	Odysseus (c)
	ZEUS[1]	Minos	Deucalion[9]	Idomeneus
		Sarpedon	Catreus	Aërope[1]
		Rhadamanthys		
	(no father)	Talaus	Mecisteus	Euryalus
Megapenthes			Cteatus	Polyxenus
ZEUS Danaë	Perseus	Gorgophone	Tyndareus Leda	Helena (a)
				Clytaemnestra (b)
Amyclas	Cynortas	Perieres	Icarius	Penelope (c)
Perieres				
Tros	Ilus	Laomedon	Priamus	Hector
			Tithonus (*went away east*)	
	Assaracus	Capys	Anchises	Aeneas
	Ganymedes			
Labdacus	Laius	Oedipus	Eteocles	
			Polynices	
	ZEUS Europa	Minos I Lycastus	Minos II Pasiphae	Deucalion[9] (*v above these generation of 1230*)
		Sarpedon		Catreus
Tectamus[9]	Asterius	[1] Rhadamanthys		Androgeos
Cretheus[8] Daughter	(childless)			Ariadne
			ARES Astyoche	Ascalaphus
				Ialmenus
Clymenus	Azeus	Actor		
	Erginus	Agamedes		
		Trophonius		
Eteocles	Almus (q. v.)			
1330	1300	1260	1230	1200 B. C.

GREEK FOLK-MEMORY FROM PRE-DORIAN TIMES.

(13) But not all Dorian families were thus driven north "by the Cadmeians." Diodorus[37] preserves a very important pedigree, in which Tectamus "son of Dorus"—therefore in the generation of 1330, and contemporary with the "Æolian" attack on Lesbos (La-as-pa in the Hatti record)—came from Thessaly "with Æolians and Pelasgians," and founded a new régime in Crete. Tectamus married a daughter of Cretheus son of Æolus, but his son Asterius died childless in Crete (about 1300) and it was "in his time" that "Zeus and Europa came"; and their children Minos, Sarpedon, and Rhadamanthys consequently flourished about 1260. Here there is obviously confusion between Minos son of Europa and the "divine-born" Minos who belongs to the generation of Pelops and Æacus, and was grandfather of Idomeneus; for Diodorus proceeds as if the son of Europa were grandfather of Minos husband of Pasiphae, who is the "divine-born" Minos of 1260; and inserts as links the names of Mount Ida and the Cretan city Lycastus, clearly a piece of later construction. What is significant is the tradition that a "son of Dorus" was concerned in an otherwise Æolian aggression in Crete, contemporary with Æolian aggression in Lesbos.

Archaeological and Linguistic Counterparts of Genealogical History

Only a brief outline of events, based upon these genealogical materials, can be presented at this stage. But it is significant in itself, and suggestive of further research, more especially on certain sites where the stratification should correlate it (if it has any foundation in fact) with changes of material culture.

(1) The Minoan exploitation of the mainland began in Argolis about 1800 B.C., to judge from the earliest "shaft graves" at Mycenae. This accords closely with the genealog-

ical date 1760 for Phoroneus, the first non-symbolic name in the Argive pedigree. It went on without cultural interruption to the time of the Fall of Cnossus, and probably longer: and this agrees with the genealogical date for the division of the old Argive kingdom between Argos and Tiryns in the generation of 1360, or 1330 if the generation of Danae be discounted, as some heiress-generations appear to have been. This corresponds with the refortification of Tiryns and Mycenae. But between 1460 and 1430 occurred the "great killing" of Egyptian men by Danaan women, as the sequel to some kind of Egyptian intervention in connection with the return, from Egypt, of exiled Argives who had been there since about 1500. (2) Other interventions from oversea are indicated about this time by the new dynasty of the "elder Minos" in Crete,[38] the colonization of Lycia by Sarpedon and Rhadamanthys, and the occupation of Thebes by Cadmus, all about 1400. How these are to be correlated with the Fall of Cnossus is not yet clear. But as the effect of the Cadmeian occupation was to stop the southward spread of the Æolids, and as the Cadmeian régime itself collapsed as soon as Æolids and Pelopids had worked round through the western districts and attacked it in rear from the Argos of Adrastus and Atreus, it is likely that it was a deliberate Minoan reinforcement of the "palace" régime, already established at Thebes as its ruins show.

(3) Quite independent of these events in the south,—so far as can be seen at present—was "Deucalion's flood," devastating the Copais lowland some while before 1430. This literally took the heart out of the "gray-ware" régime, which had been established in Central Greece early enough to have dominated the Isthmus region and Argolis before the Minoan exploitation began; that is to say, before 1800. (4) Some survivors from the Copais disaster took flight southwards into Attica, and are represented in Attic tradition by Amphictyon son of Deucalion. But from this point

onward Attica begins to have a dynastic history of its own, and its great king Erechtheus, in the generation after the fall of Cnossus, had a "strong house" on the Acropolis, which was famous still in Homeric tradition as the special home of Athena. Its ruins show a Mycenaean palace like those of Mycenae and Tiryns, heavily fortified. This régime endured till the popular revolt of Menestheus, about 1200, which brought Attica into the feudal régime of the House of Atreus. Previously it had held its own against all comers: but it is not yet certain whether the deliverance from Cretan dominance belongs wholly to the generation of 1260–1230 or incorporates memory of the collapse of the "palace" régime when this Athenian dynasty was still young, and perhaps was a contributary cause of that disaster.

(5) Other refugees from the Copais took to the westward hills, inhabited them for a while, then descended into Opuntian Locris, still cherishing memories of the "great flood," just as Athenians remembered the lost "Athens" and "Eleusis" in the lake-land. The cult of Deucalion remained till classical times at Opus, but the Deucalionids spread rapidly, and far beyond the limits of Locris.

(6) Of these Deucalionids, some drifted away westward, up the Spercheius and across the pass into the west-country. Some of them, Endymion's people, the Epeians and Eleians, and also the family of Diomedes, occupied parts of Peloponnese, on several occasions between 1360 and 1260; but others remained in Ætolia; and there were other Epeians later in the neighborhood of Locris and Boeotia, who perhaps had never moved very far west. But it is not necessary to suppose that all or any of the western Deucalionids ever made a home around Opus; and probably they lost touch early with those who did. How far these adventurers penetrated, is not clear. The western legends refer only to Elis and Arcadia. But Sisyphus reached Corinth; and some disturbance of the occupants of northeastern Peloponnese is

revealed in the exodus of "Ion and his people" from this district to Attica, which must be dated, as we have seen, between 1330 and 1260 (p. 325).

(7) From among these eastern Deucalionids, in Locris "Hellen and his sons" moved out northward about 1400, first as far as Phthiotis; then, as the "sons of Æolus," northward into Thessaly, and also southward about 1330, Athamas to Orchomenus, Sisyphus to Ephyra, Perieres into Laconia, where the second Perieres about 1260 married the Perseid heiress Gorgophone and became the father of Tyndareus. Similarly, Salmoneus about 1330, and Neleus about 1260 went west-about into Peloponnese.

(8) From Phthiotis, also, according to Herodotus, the Dorians were driven farther north in the generation after Hellen, that is to say, in the days of Æolus, about 1360, and occupied the highlands of Pindus beyond the Thessalian plain. This indeed seems to be the prime distinction between Dorian and Æolian, that the latter remained within the regions which were being dominated during all this long period by expanding "Late Minoan culture," whereas the Dorian home-land lay beyond it. What the culture was, with which such Dorians came into contact and were imbued, out there, is a further question, to be answered (in Chapters VII and VIII) with other kinds of evidence.

(9) A very important supplement to the Cadmeian episode is the statement of Herodotus that the ancestors of the Dorians were driven out of Histiaeotis—which he explains as meaning the district "under Ossa and Olympus"—by the Cadmeians. So far as this statement has attracted attention at all, it has been interpreted as referring to an overland expansion northward of the Cadmeian régime in Thebes. But there were Cadmeians elsewhere than in Boeotia; in Thera, for example, and Thasos. And we have now seen reason to regard the Cadmeian occupation of Boeotia as a reinforcement of the Minoan exploitation which is attested

by the "palace" and "beehives" at Thebes. That the same exploitation reached Orchomenus is clear from the great "beehive" there. From the decoration of its inner chamber, it cannot be later than 1400, and may be rather earlier. Now there was a similar exploitation of southeastern Thessaly; not from the southern land front, however, but from the Pagasaean gulf, with some half-dozen "beehive" tombs, one of which is cut into the far older Thessalian settlement at Dimini.[39] They are not of fine style, nor early date; certainly not earlier than 1400, but the earliest of them not much later. Here we have archaeological evidence for just such a situation as is described by Herodotus; foreign intruders splitting the "sons of Hellen" into a southern or Æolic section, in Phthiotis and western Thessaly, and a northern or Doric section, first "under Ossa and Olympus"; then, as the area of Cadmeian dominance expanded, "in Pindus"; that is to say, confined to the highlands north of the Thessalian plain. Separated thus from the Hellenes of Phthiotis, secluded among less advanced conditions of material civilization, and moreover exposed to quite different influences as we shall see (in Chapter VII), these northerly "children of Hellen" remained in many respects more like their prototypes than those who spread southward either east or even west of Parnassus.

(10) Between the north-country, from the Copais northward, and the south-country,—Attica, the Isthmus region, and eastern Peloponnese as far as the "gray-ware" influence extended,—the foreign régime of the Cadmeians reinforced the barrier created by the flooding of Copais. The "gray-ware" culture had already been here for some while, as we have seen; but its influence had been profoundly modified by local conditions, and still more by the Minoan exploitation, which affected Attica and Ægina as well as Argolis, though not so profoundly, nor with such splendid economic as well as artistic results.

(11) Then about 1260, a quite fresh factor comes into play. The "divine-born" families with foreign names appear; Æacus in Ægina, and thence Ajax in Salamis, and Peleus in Phthiotis; Minos grandfather of Idomeneus in Crete. These come in from nowhere, that is to say, from oversea. Another great family, Phrygian in origin, with domicile also in Lydia, appears first with Pelops among the mixed tribes of the west, later at Mycenae with Atreus, then at Sparta also with Menelaus. Along with it come Neleus into Messenia, Tydeus into Argolis, Arcesius to Ithaca, marrying heiresses of actual dynasties, and succeeding to their castles and domains. Though Corinth fell to the share of Atreus, Attica (including Megaris) recovered its independence after brief servitude to Minos of Crete, kept aloof from the quarrel between Argos and Cadmeian Thebes, and remained a city of refuge for broken men such as Œdipus and Orestes. After the fall of its ancient kingship, about 1200, it owed restricted service to the House of Atreus.

(12) We are now in a position to appreciate the significance of an important tradition preserved by Diodorus (v. 80) that before the days of the later Minos (who is of the generation of 1260) a population of "mixed foreigners" was "in time assimilated in speech to the Greeks who were there"; and the numerous stories about the expulsion of "Carians" from the islands at this time mark a similar change of language. The "assimilation" of the Caunian language to Carian, or vice versa, discussed by Herodotus, is another example. The numerous Cretan colonies planted in Lycia, in the Cyclades, at Chios and Erythrae,—the latter actually on the mainland which was Ionian later—and even as far north as Lemnos, carry the same process farther; and interlock with the foundations of Xanthus (specifically Argive) in Lycia and Lesbos, of Macareus in Lesbos, Chios, Samos, Cos, and Rhodes (supplementing those of the "Children of the Sun"), and of that Æolid who gave his name to Lesbos,

and married a daughter of Macareus. All these now take their historical place as minor operations in the "Achaean" aggressive which begins with Andreus and Eteocles before 1300 and reaches its climax with Atreus and the Achaean allies of the Libyans in their invasion of Egypt in 1221. Between 1260 and 1230, this new régime culminated in the "sea-power" of Minos, the settlements of Rhadamanthys, Sarpedon, and Bellerophon on the coast of Asia Minor, the aggressions of Atreus, and the contemporary sea-power of the Thessalian Æolids, whose Argo explored the shores of Pontus, Libya, and perhaps also the Adriatic. To such "viking" raiders, a voyage up the Danube, such as Apollonius describes, was not at all out of question.[40]

(13) But two could play at that game. In the generation of Pelops, Æacus, and the later Minos, Laomedon fortified Troy, and had islands of his own; Priam led his contingent up the Sangarius, Mopsus brought his forces over Taurus into Cilicia. By 1200, Land-raiders and Sea-raiders could make rendezvous on the Syrian coast. The Hatti régime collapsed, and Egypt was in danger.

(14) Then, as between Mycenae and Cnossus, came quarrel and war to the death between Mycenae and Troy. There had been "Amazon" raids into Europe, as far as Attica, occasionally, just as warfare had been carried into "Amazon" countries by Heracles, Theseus, and Priam. But this was civil war, precipitated (if the coincidence of dates may be pressed) by the defeat of the whole Trojan confederacy, or a large section of it, by Rameses III. War losses, and long absence of personal rulers, whether at the siege of Troy, or in the Crusades, lead to disorder and intrigue at home. In the fifth generation the "divine-born" dynasties fell at the "coming of the Dorians."

Who the "divine-born" adventurers west of the Ægean were, is fairly clear from their close relations with the régime of Laomedon and Priam. There is no reason to assume that

they were numerous, or had numerous forces. Even after two generations, the number of ships in the *Catalogue* renders only a small total in men-at-arms; and these included *laoi*, local contingents who did not want the war, as well as *anaktes* and their *hetairoi*, who did, and enjoyed it.

Philological Reconstruction of the History of the Greek Dialects

We have next to compare this outline of historical events with the distribution of Greek dialects in historical times, and with the redistributions which were inferred in Chapter III, from their eventual relations to each other, but were left undated, for lack of contemporary testimony.

In the first place, the distribution of the Doric dialects, their close relations with the West-Greek dialects, the survival in some of them of elements from the Arcadian group, and conversely the traces of Doric elements in Pamphylian and in the speech of Western Thessaly, make it certain that Doric speech is the language of the last newcomers into those regions. Their coming was both recent and discontinuous; and in Thessaly and the settlements east of Rhodes they were not numerous or strong enough to impose their language and mode of life on Greek-speaking folk already in occupation. Of the two main regions of Doric speech, one, including Laconia with Messenia, western Crete, Melos and Thera, corresponds precisely with the areas of Spartan conquest and colonization, down to the eighth century. The other, Argolis, together with the Isthmus region and Megaris, the colonies from eastern Crete to Rhodes and Cos, and the colonies founded by Corinth and Megara in Sicily, corresponds similarly with the area of Argive-Dorian conquest and colonization. On the other hand, in Cycladic islands not occupied by colonies from Dorian states in Peloponnese, Ionic is spoken, not Doric; and in Cyprus, Curium and Lapethus, which were believed to be respec-

tively an "Argive" and a "Laconian" colony, yield tomb-equipment of earlier periods than the traditional date for the "coming of the Dorians" into Peloponnese, and must therefore be attributed to pre-Dorian, that is to say to Arcadian-speaking settlers, which is in accordance with their actual speech. The proof is therefore complete for identifying the Doric group of dialects with the speech of the Dorian invaders.

With the exception of one passage in the *Odyssey*, describing the composite population of Crete, and including Dorians in it, the Homeric poems make no mention of Dorians, and moreover describe a general distribution of political influence which is quite different from that which resulted from the Dorian conquests. We have seen, however, (p. 316–8) that the silences of the *Catalogue*, as well as its positive statements, indicate how the landward boundaries of Agamemnon's confederacy ran. And though there is no direct information as to what lay beyond it to the north and west, these boundaries are in accord with the tradition, current later, of a period when there were Dorians in Macedon, and also in the Doris north of Parnassus, though no Doric dialect is found in either district in historic times, and only a trace of its former presence in Doris. This is positive confirmation of the account given in the *Catalogue* of the condition of central and northern Greece, at the period which it professes to describe, and also of later folk-memory about movements of Dorian-speaking peoples.

Further, Homeric information as to the earlier descents of Epeians, Eleians, and Æolids into western Peloponnese, from the northwest and from as far afield as Thessaly, in the generations from 1330 to 1260, illustrates not only the facilities for such a "coming" as that of Pelops the Phrygian in the generation of 1260, and the traditional Ætolian guidance enjoyed by the Dorians themselves, but also the eventual establishment of a West-Greek dialect in Elis.

For this western avenue from the north into Peloponnese, once explored, lay open to the Dorians, and remained open after the Dorians themselves had spread onwards into Messenia, Laconia, and probably also into Argolis and the Isthmus region. Whether Dorians had ever settled down in Elis itself and then been replaced by subsequent immigrants from Ætolia, cannot at present be ascertained. Archaeological evidence indicates, as we shall see (p. 506) that Olympia shared, for a while, the earliest culture which has been found at Sparta itself. Moreover the place name Dyme on the north coast of Elis suggests that a detachment of Dymanes broke away and settled here. For such a settlement by a single tribe of a composite people, we may compare the community of Samians "of the tribe Æschrionia" whom Herodotus notes as established in an oasis of Libya seven days west of Egypt. As to the antecedents of the Dorians themselves, folk-memory contributes only the significant statement that in "the generation of Dorus," about 1360, they were in Histiaeotis "below Ossa and Olympus," neighbors, therefore, of the "sons of Æolus" in South Thessaly; and that they were driven thence by Cadmeians into the highlands of Pindus to the northwestward.

The Æolic group of dialects is more easy to identify. Though affected slightly and locally by Dorian intrusions, it represents the speech of the "sons of Æolus" who are the earliest, most coherent, and perhaps the only original "children of Hellen." They are first perceptible in Achaea Phthiotis about 1400, and thereafter spread rapidly between 1360 and 1330 over South Thessaly and into Central Greece. About 1330 they were attacking Lesbos, but under a fresh line of chiefs, of whose origin nothing was known except that they came from the Peneius or beyond it, and had given Orchomenus to the Æolid Athamas. The Athamantid house had early dealings with Thebes, for Athamas married a Cadmeian, Ino; with Hellespont, through Phrixus and

Helle, about 1300; its Argonauts colonized Lemnos and explored Pontus about 1230. But their home was in South Thessaly, and Orchomenus changed hands repeatedly, falling to Neleus about 1260 as the dowry of his wife Chloris. In the generation of 1330 Sisyphus established himself at Ephyra (which may be Corinth), Perieres in Laconia, and Salmoneus in Elis; but nothing is known about their routes. After that there was a check, and for this there was a reason. For south of the Copais marshes the Cadmeian dynasty which had occupied Thebes about 1400, was extending its Late Minoan establishments widely, and made at all events one raid into the Dorian home-district in Thessaly.

Later, about 1260, some Æolid families were involved in a fresh disturbance and were carried down into Peloponnese, Neleus to Pylos, Bias (on business) to Argos, along with a quite separate folk, descended from Deucalion, but not "children of Hellen," still less "Æolids." These worshiped Ares, and are only traceable in northwestern Greece and western Peloponnese, except the families to which belonged Diomedes and Leda. In Peloponnese Neleus had some trouble with other Deucalionids, the Epeians, who had been there since about 1330, and more with his nearer relative Melampus, brother of Bias.

That there was a real "Æolian" people about 1300, and that they had already occupied Lesbos, is indicated by Hatti evidence. It does not follow however that Andreus and Eteocles of Orchomenus were themselves of Æolian descent, and their pedigree makes them "divine-born" sons of the river Peneius. At Orchomenus they are a dynasty, and a short one.

The Æolic-speaking peoples of classical times may therefore be provisionally identified with the clans whose chiefs are genealogically "sons of Æolus," and be recognized as occupying certain districts of Thessaly south of the Peneius from about 1360 at all events. Later, about 1200, the Cad-

meians were expelled from Thebes and as Herodotus says "took refuge with the Eel-folk"; commonly identified (by an excusable popular etymology) with an Illyrian tribe, the Encheleis, but more probably the local eel-fishing "musk-rats" of the Copais, where the fortress on the rock of Gha testifies to such an "Isle of Ely" in very late Minoan times. This catastrophe opened the long-closed route to the south, and Thucydides brings in Æolic "invaders from Arne" in the generation of 1130 (sixty years after the Trojan War) to establish by conquest the historical régime in Boeotia. Strabo adds, probably from Ephorus, that with them came exiled Cadmeians, much as Heracleids "returned" with the Dorians.

It can hardly have escaped notice that in analyzing the Greek dialects in relation to their geographical distribution, ambiguities have arisen from an overlap between Æolic-speaking folk and the Ayavalas, Ahhiyava, and La-as-pa of the Hatti documents, and also from the overlap between Arcadian-speaking regions and some of the "Achaean" baronies which owed service to Agamemnon son of Atreus, and had come into existence for the most part during the lifetime of Atreus or Pelops. These ambiguities are mitigated, though not removed, by the consideration that neither in Hatti documents, nor in the Homeric poems, nor in later Greek usage, does the term "Achaean" refer to any distinction of language, except in the single passage of the *Odyssey* about the peoples of Crete; which needs more explanation than it affords. Consequently there is nothing to preclude the solution that the term "Achaean" denotes not any particular tribe or tribes speaking a particular dialect, but a political régime or organization; much as the term "English" and its foreign equivalents "Englander" "Anglais," or in medieval Latin, "Angli" are used to include men of various local dialects (some of them descendants of a particular group of clans, the Angles, though most of them

not) but are chiefly and properly used in general history to denote a political régime, and an outlook on life, shared by them all, and very effectively supported by Scots, Welsh, and even Irish. These indeed are so clearly distinct from the birthright English, that the still more inappropriate term "British" has had to be invented or misapplied, like the term "Hellene" in Greek, as a general designation sufficiently erroneous or meaningless to be generally accepted, and moreover on the distinct understanding that it excludes the large majority of those who speak the English language or "western" dialects of it.

For the Arcadian group of dialects the nearest approach to a genealogical counterpart is the western group of Deucalionids. So small is its historical distribution south of the Corinthian gulf, and so numerous are the symbolic namesakes of peoples (and among them Ætolians, who spoke a West-Greek dialect in historic times) that it might seem at first sight proper to include this group among the West-Greek-speaking associates of the Dorians, and to consider its few Peloponnesian members as precursors of the later Eleians.

But this identification would leave the Arcadian group of dialects unexplained; and as the distribution of those dialects makes it certain that their expansion occurred in pre-Dorian times, that is to say, at latest under the régime of "Atreus of Achaea," it is necessary to look for their counterpart within the period which the genealogies cover. At this point alternatives are presented; for alongside the Deucalionids, who are at all events cousins of the Æolids and other Hellenes in the genealogical sense, there is an important family in Arcadia itself, with a pedigree which comes down to Agapenor who "fought in the war," and goes up to the eponymous Zeus-born Arcas in the generation of 1360, preceded only by Kallisto (1400) daughter of Lycaon (1430), who is a son of Pelasgus (1460) the antediluvian figure whom

Æschylus staged in the *Supplices* as king of pre-Danaan Argos. Once again, as in so many other pedigrees, symbolic names like Arcas and Æolus end, and personal names begin, between 1360 and 1330. The only link between this pedigree and others is the liaison between Ischys and Coronis, who was a Phlegyan of northeastern Thessaly; but it is sufficient to raise the suspicion that Arcas may be a strayed Deucalionid of the western group, affiliated to the local Arcadian all-father Lycaon in the fourth-century phase of "Pelasgian theory."

Even if the western Deucalionids were still mainly in Ætolia about 1260, the "coming" of Pelops, Œneus, and their people was ample occasion for the spread of "Arcadian" dialects also over Peloponnese, and beyond it oversea. And as the "Arcadian" group includes Pamphylian and Cypriote, and has influenced Cretan Doric, it must represent either the original speech of the first Ægean settlers in those regions, or that of some later intruders who became dominant there. Now the Late Minoan settlements in Cyprus are considerably earlier than the Sea-raids of 1200–1190. Their continuous archaeological series goes as far back as about 1500; too far back, that is, to be related to any movements of the "divine-born" dynasties of 1260. The settlement at Ialysus in Rhodes goes back to 1400 at least; and the sites in Argolis are older still. Moreover we have folk-memory of a change of language in Crete in Herodotus' account of Sarpedon, the colonizer of Lycia; the language of the people who were historically called Lycians, and called themselves Termilae, is not Greek at all; and there are documents in the Cypriote syllabary—which is mainly derivative from Minoan, and therefore not earlier in Cyprus than the Minoan settlements—both in an "Arcadian" Greek and in a quite different language. There is therefore a strong case for inferring that the "Arcadian" group of dialects results not from the first Minoanization of these

remoter regions, but from the later conquest of them, as of Crete itself, and of the Mycenae and Sparta of the Tyndarid kings about 1260, by the "divine-born" dynasties and their "companions," some of whom we have seen to be demonstrably Deucalionids of the western group.

This alternative, in particular, helps to explain how it happened that a script of the Minoan group remained in use for Greek in Cyprus, whereas in Crete and Mycenae, where this script was "at home," it did not. For in Cyprus the "Arcadian" hellenization was not only the first but also the last; there was no Dorian invasion here. On the other hand, in Rhodes, and Crete, as in Peloponnese, the Dorian invasion came soon and severely, imposing illiterate conquerors on the descendants of the "divine-born" kings, and postponing the acceptance of any system of writing for Greek, till the spread of alphabets related to those "Cadmeian letters" which Herodotus saw at Thebes.

Now though there is no Homeric reference to the regular use of writing by the "divine-born" kings themselves, writing as a weird means of conveying information secretly was not unknown to them, and had been in use for this purpose between kings of Corinth and Lycia as recently as the generation of 1260; and in Homer, too, the "divine-born" themselves mark their lottery stones by scratching personal marks on them.[41]

But if the "Arcadian" group of dialects represents, as seems probable, the speech not of the "divine-born" dynasties,—for Pelops himself was a Phrygian, and we shall see that in this distinction, too, there is significance—but of the Deucalionids who had been making their way gradually into Peloponnese from the northwest since about 1330, what was it that was spoken in Peloponnese or at all events in its northeastern districts,—where alone we have any clue—before the spread of "Arcadian" dialects from the west?

The clue seems to be given by those indications of a former distribution of "Ionian" people,—and presumably therefore of proto-Ionic speech—not only in northeastern Peloponnese, but as far south as the Cynurian country west of the Argive gulf, where it was only gradually that it had been replaced, not by Arcadian of any kind, but by Doric, and where consequently it had maintained itself without serious change through the five generations of the "divine-born" owing to its sheltered position, and the brevity of their rule.[42] When, then, did such a proto-Ionic dialect become established here, and also—for this is implied in the view now under examination—in Attica, and in the parts of Central Greece immediately to the north, where Ionic elements are incorporated in Boeotian Æolic? It must have been established earlier than the coming of the "divine-born" kings into eastern Peloponnese, and also earlier than the coming of the Æolids into Central Greece, and the creation of the Æolian régime known to the Hatti scribe about 1330. But there is no severe crisis in Argolis before the coming of the Pelopid dynasty, until we go back to the break which followed the "great killing" about 1400 (p. 324). In Attica too there is no break at all after the reign of Pandion son of Erichthonius, also about 1400; and it was not till a generation later than this that the first Æolids appeared even in Thessaly, though there was a "Boeotian" attack of some kind upon Attica in the days of Erechtheus (1360) almost immediately after. Now though Erichthonius and Pandion mark the beginning of a fresh régime, this immediately succeeds that of Amphictyon son of Deucalion, to which reference has been made (p. 339). So unless we are to assume a much older date for the Attic Deucalion than for his Central Greek namesake barely three days' journey northward in Locris, and also a personal existence for the symbolic Amphictyon, we seem to have here fairly

good folk-memory about just such a non-Hellenic group of "children of Deucalion" spreading southward from Locris, as the pedigree of Endymion has indicated spreading westward into Ætolia and thence into Elis, within the same generation as saw "Hellen and his sons"—let us now frankly say, the Hellenes—moving northward, according to Greek story, into Phthiotis.

"Hellen and His Sons" and "Deucalion's Flood"

If this analysis of dialect distribution in the light of folk-memory be correct, an important consequence follows; for while the "children" of Hellen and of Endymion found themselves in regions unaffected as yet by the Minoan culture, anyone who moved southward came at once into the Minoanized region indicated by the great beehive tomb at Orchomenus, which is in the same workmanship as the greater "beehives" at Mycenae, and by the Minoan "palace" at Thebes, which was certainly established considerably earlier than the Fall of Cnossus. Farther south still, in Argolis (and probably also in Attica, though later buildings have destroyed most of the Minoan structures at Athens), Minoan culture was of even greater antiquity. Consequently all through this region—and this region only—Deucalionid, that is to say, Greek-speaking folk were confronted with an older and materially higher culture, and the civilized Minoan language belonging to it; and consequently underwent those more profound phonetic changes which distinguish the Ionic group of dialects from all others.

It hardly needs to be noted, finally, how this reconstruction of the linguistic and traditional evidence fills in the broad outline sketched long ago by Thucydides, that it was "when Hellen and his sons grew strong in Phthia, and other cities called them in to their aid" that Greek lands became Hellenized. For the circumstances of the generation of 1400, as we know them now archaeologically, give us the

reason why those "other cities" needed all the help they could reach, in the multiple crisis of the destruction of Cnossus, the Cadmeian occupation of Thebes, the Danaid massacre, and also the contemporary movements of other Greek-speaking folk, into Attica to the southeast, and into Ætolia westward, from the same "kingdom of Deucalion" in the foothills of Parnassus.

According to the legend, what brought Deucalion down from Parnassus, and what had brought him up into Parnassus before, was what the meteorologists call a rainfall maximum; and the regions immediately below Parnassus include one which was in most imminent danger of being flooded out by any such accident, namely the Copais lake-land.[43] And the Copais lake-land, as we have seen, lies right in the heart of the area of dispersion of the old "gray-ware" culture. Can we doubt that the secret of its origin lies still buried under the deposits of "Deucalion's flood," which found the natural outfall choked, and submerged the whole basin of the lower Cephissus?[44]

We have thus a close correlation between the traditional distribution and early movements of the Hellenes and their kinsmen, the western and southern Deucalionids, and the focus and spread of the "gray-ware" culture, which we have realized already (p. 261) as an outstanding anomaly in the archaeological record on the Greek mainland. Archaeologically we have already seen reason to connect the rapid spread of this "gray-ware" culture with the apparition of that "oval-house" culture, shortly before, which likewise seems to emerge at the point where the distribution of burial mounds ceases; and where consequently we have reason to suppose that people of ultimately grassland origin, who had passed through Macedon and Thessaly in nomadic fashion, leaving no trace but a few burials, found themselves in a cul-de-sac where the main ridges of Pindus swing round to the southeast through Parnassus, Helicon, and Cithaeron,

to Parnes and the east coast, and run out half-submerged into the Cyclades. But whether, in the composite culture which spread so widely and rapidly it was the "gray-ware" element, or the "oval-house" element, that was more truly associated with Greek speech, must be left for further research to determine.

Summary of the Correlation of Philology with Folk-memory

Philologically, this situation accords with the main facts about the origin of the Greek language. It is Indo-European in structure; therefore it came into the Mountain-zone from beyond, to the northward, like the Aryan, Iranian, and Našili groups. It is of the western branch phonetically, in this respect resembling the Našili language of the Hatti, and standing apart from the Phrygian and Thracian groups which are more closely akin to the eastern.

This anomaly needs, and finds, explanation. For as the Našili language was established in Asia Minor some while before 1400—whereas the first traces of Phrygian peoples are long subsequent, as intruders into Asia Minor soon after 1300, and into peninsular Greece in the generation of 1260,—the arrival of Greek-speaking people in Greek lands must be prior to the coming of the Phrygians, and this the genealogy of "Hellen and his sons" enables us to confirm.

Further, as the coming of the Našili language seems to be connected with the coming of a political régime which goes back at least to 1900, it is probable that the Greek-speaking people reached the Greek peninsula about that time; and this accords with the spread of "oval-house" and "gray-ware" through southern Greece. As the genealogical evidence restricts the spread both of "Hellen and his sons" and of other "children of Deucalion" to the centuries after 1400, this allows a period of about five hundred years, between the arrival of Greek speech in Central Greece, and the new

movements which redistributed the northern groups of those who spoke it. This same period, of five hundred years at most, is available also for the differentiation of the speech of those southern participants in the "gray-ware" culture, who penetrated into regions round the Saronic gulf already affected by Cycladic exploitation, and were themselves exposed to Minoan exploitation up the Argive gulf in the centuries after 1700. And the result of this contact is inferred to be the divergence of the Ionic group of dialects from the rest, which lay farther to the north outside the Minoanized area, and were further secluded, first by the flooding of the Copais about 1430, and then by the Cadmeian occupation of what was left above water in Boeotia.[45]

The redistribution, first of Arcadian and Æolic dialects, then of Doric and Western, is similarly correlated with the redistribution of families and tribes, as described in the genealogies. An injection of Phrygian raiders, and apparently also of Thracians, affected the political structure profoundly, and led to cooperation of mainland folk from all coasts of the Ægean in the Sea-raids. But it did not affect the Greek dialects themselves appreciably, because these raiders spoke an unfamiliar tongue (as their personal names show) and do not seem to have brought their women. But the facilities for intercourse between Æolic-speaking and Ionic-speaking people in "Achaean" courts, markets, and harbors, made possible the conflation of two more or less ready-made idioms into the *lingua franca* which is preserved in the Homeric poems. How intimate this social intercourse was, will be illustrated from quite independent evidence in Chapter VII.

Similarly the foreign Cadmeians left no trace of their own language except the names of their earlier chiefs, Cadmus and Labdacus; but they transcribed the language of their subjects into their own script, in which Herodotus says that most of the letters resembled the Ionian. Their

régime was destroyed shortly before 1200 by Argos and its confederates; and when they returned, in the generation of 1130, it was as an element in that "migration from Arne" which did little but redistribute Æolic-speaking tribes.

It remains now to discuss the reasons for the supersession of the old Minoan culture in Greek lands by that which eventually bloomed into Hellenism. But with the "coming of the Dorians" the redistribution of Greek dialects is already accomplished, and philology has no further evidence to offer. With the collapse of the Hatti régime, and the seclusion of Egypt after the reign of Rameses III, contemporary allusions in oriental documents cease. We are consequently restricted once again to archaeological evidence, for the sequence and intervals among events; and to the religious and social institutions of classical times, for survivals of various attempts to "live well" during this period of turmoil and rejuvenation.

CHAPTER VII

THE CRUCIBLE AND THE MOULD

I have called this chapter "The Crucible and the Mould," because the subjects of it are two, and complementary to each other. In previous chapters, we have analyzed the physical constituents of the mixed breed of people whose descendants were the Greeks of classical times, and our examination of the genealogies has enabled us to confirm ancient belief as to the periods at which the more important of these constituent strains were added to the mixture. In particular, a period of about three hundred years of widespread agitation was followed by another period of quiescence and recuperation, when no new elements were added, so far as we know, and those that were already there were commingled and interbred, in small separate communities, each with its own local population, traditions, and ideals, but all nevertheless interrelated by the common ties of language, religion, and material culture, with which they were severally equipped when they were poured, so to speak, from the crucible of the Migratione Priod into these regional moulds of the Early Iron Age.

The Wider Perspective after the Fall of Cnossus: Eastward, Westward, and Northward

To the Migration Period, genealogical evidence has enabled us to set an upper as well as a lower limit, and that upper limit coincides with the great crisis at which the course of material civilization, which we were following from its multiple origins in Chapter V, was abruptly checked and diverted by the quarrel between Cretan Cnossus and derivative mainland centers such as Mycenae, whereby

the "palace" régime was shattered, and mainland peoples were set free to explore the larger world outside the South Ægean. These adventures took them to Cyprus, Egypt, and the coasts of Syria and Libya, as we have seen from the linguistic and documentary evidence collected in Chapter III. They extended also along the sea ways westward, to Sicily and beyond, and into the Adriatic. Northwards too they reached not only Troy and the Pontic region, as the story of the Argonauts shows, but the seaboard of Macedonia, behind which lay fairly easy through-routes to the Middle Danube. As the legend of the Argo shows some acquaintance with the Danube, not only as a way out of Pontus, but as offering a kind of "northwest passage" into the head of the Adriatic, the material evidence for intercourse between Danubian and Ægean cultures needs careful examination, both as commentary on such folk-memory, and in relation to the general question of the source and occasion of subsequent disturbances in the back-country of peninsular Greece.[1] Once again, therefore, the cultural history of the Ægean has to be projected against the larger background of our knowledge of what was going on in eastern and central Europe, as well as in western Asia.

The "Mould" of the New Colonial Areas Oversea

From three distinct classes of evidence,—the distribution of Greek dialects in classical times, documentary references to the Land-raiders and Sea-raiders of the thirteenth and twelfth centuries, and archaeological inferences from the redistribution of arts and industries in the culture of Cyprus, Palestine, and Syria,—at all events outlines are recognizable of the situation east of the Ægean before 1000 B.C.; wherein the "Muski" or Phrygian group of peoples occupied much the same political and strategical position as the Hatti folk whom they had superseded, and interposed a similar obstacle between the culture of the Ægean coast lands and the

oriental, essentially Semitized culture of the complex of smaller states which lay between the Mesopotamian kingdoms and the Syrian coast. Once again, as so often both earlier and later, the aggressors of the previous age become the defenders, in the next, of the position which they had won.[2] What is significant, however, is that with each successive stabilization the range of the defensive screen between civilization and outland has been extended. The Hatti dominion had had no counterpart west of the Bosporus; beyond the "kingdom of Midas" in Asia Minor, there loom up between Ægean and Danube similar régimes in Thrace and Macedonia. The next age in the Ægean could therefore include a Chalcidice and a "Thrace-ward part," as well as an Æolis and an Ionia.

Now it was in the interregnum between the collapse of the Hatti régime, about 1200, and the consolidation of the western districts of Asia Minor into that "inner-guard" kingdom of Lydia, which Gyges built and Croesus ruined, that all those coast districts which had been so significantly foreclosed to Ægean enterprises earlier, but had been intermittently harried by adventurers like Tavagalavas and Attarissyas, Sarpedon, Bellerophon, and Agamemnon, during the fourteenth and thirteenth centuries, were occupied at last by those mixed adventurers and refugees from peninsular Greece, who made them respectively Æolic, Ionic, Doric, and Pamphylian in the twelfth and eleventh. Of the course of events on the open fore-shore of the Macedonian river-valleys, and the bays of the Chalcidic peninsula, we still know even less than of the first colonies in Asia Minor; but the existence of this northern counterpart to the "new countries" east of the Ægean has to be recognized, if the situation during the Early Iron Age is to be surveyed as a whole.[3] In particular, its relations with the nascent kingdoms of Macedonia and Thrace illustrate, in the fuller light of history, those of the Asiatic colonies with the dynasts

of Sardis and Mylasa. And these relations fell out as differently as they did, mainly because the primary function of Macedon and Thrace as "wardens of the marches" toward unreclaimed Europe was both fundamentally the same as that of Lydia and Phrygia toward aggressive empires in the East, and yet strongly contrasted as regards their respective opponents.

Behind this double shield, then, of the new Phrygian overlordship in Asia Minor, and the closely related peoples of Thrace and the back-country toward the Danube, the north and east coasts of the Ægean had "respite from troubles" from the close of the eleventh century to the coming of "Cyrus the Persian." And it was into this firm "mould" that the rich alloy of refugee colonization was poured.

Till a change in the political situation permits, at last, systematic exploration of these coast districts and excavation of their refugee settlements, it is only by indirect evidence, and analysis of their eventual culture, that this almost accidental consequence of the collapse of the Hatti régime, but almost inevitable sequel alike to the Trojan War and to the "coming of the Dorians," can be investigated. But as the dialects and also many of the cults of the new coast cities[4] indicate clearly the regions whence their founders respectively came, one of the most important sources of such indirect evidence is available already, in the archaeology of the eastern districts of peninsular Greece. And these must engage our attention first, as the crucible in which were commingled those ingredients which solidified into Æolian, Ionian, and Dorian moulds as transmarine colonial states, "children of Hellen" in a sense unrealized before.

What, however, caused those tumultuary migrations oversea? Clearly the movements, whatever they were, which redistributed the Greek dialects of the peninsula, wrecked ancient castles and palaces, shifted the political

centers of Argolis, for example, from Mycenae and Tiryns to Argos, and of Laconia from the Menelaeum and Amyclae to Sparta; and subjected large districts to the rule of conquerors, none the less alien because they spoke Doric Greek.

The Epic, the Scalpel, and the Spade

At this point it becomes necessary to take account of the first literary records of material culture contributed by the Greeks themselves. The Homeric Poems, like the Old Testament, have come down to us in an "authorized version" accredited by popular acceptance, and similar, in the mode of its transmission, to the folk-memory which has preserved the genealogies. The ancient literature of the Hebrews has been perpetuated in the Massoretic text, which has superseded other Hebrew variants for reasons familiar to us all. That the Massoretic text itself closed a long period in which traditional documents were subject to the same accidents as all other early writings, is clear from the evidence of the Septuagint translation of them into Greek by Alexandrian scholars. Other Alexandrian scholars established, with similar materials at their disposal, a standard text of the *Iliad* and *Odyssey*, in the belief that they were the work of a personal Homer, as clearly conceived by those scholars as by the artists of that age, and by the authors of the traditional *Lives* of him; or as the Moses of *Genesis* and *Exodus* was conceived by Christian workers in mosaic and fresco. But earlier Greek allusions to the poems, and internal discrepancies in the Alexandrian text itself, raised, even in antiquity, the same doubts about the homogeneity of the poems, as have been raised by similar discrepancies about the "books of Moses" and other parts of the Old Testament. Before the discovery of the cuneiform texts of Babylonia, such literary criticism necessarily rested on imperfect acquaintance with the procedure of literary composition in the Near East; and for a century before the

discovery of the Minoan system of linear script, Homeric criticism likewise rested on Wolf's double assumption, first that, at the traditional date for the personal Homer, writing was unknown in Greek lands; secondly, that in the absence of written texts such poems as the *Iliad* and *Odyssey* could not have been either composed or transmitted. Similar doubts as to the practicability of a Trojan War were reasonable on the part of Thucydides, but have lost their validity in face of Merneptah's inventory of the weapons and other war loot taken from Achaean invaders of the Delta in 1221. And the discovery, first, of the great Finnish epic, far longer than the Homeric poems, among an illiterate peasantry, and then, of the Minoan script, current for centuries before the traditional date of the Trojan War, and perpetuated in its Cypriote variety into classical times, have cut away both assumptions on which Wolf based his *Prolegomena ad Homerum* in 1798, and leave the superstructure of nineteenth-century skepticism baseless. As with the genealogies, so with the narrative and the descriptive passages in the poems, we are now in a position to start from contemporary record of historical events, and securely dated objects; to identify thereby the period of civilization which the poems profess to describe, and to estimate what interval separates the poet from events and personages which inspired him, in terms of such discrepancies as we may find between the material culture familiar in daily life to himself and his audience, and that which existed in Greek lands among the contemporaries of his heroes, the Sea-raiders and Land-raiders of the early twelfth century.

Even in the lifetime of Schliemann, the doctrine that, as Homer was "Ionian," "Mycenae" did not matter, was more comfortable than discreet, seeing that the sole substitutes for those "Ionian" antiquities which Turkish soil still covers, were objects industriously collected from Etruscan and Campanian sites, and inferred to be "Ionian" because they

were strangers in Italy. Nor is it much easier, today, to show what early "Ionian" civilization was like. On the other hand, when "Mycenaean" objects had been securely dated to the fourteenth and fifteenth centuries, to use the "Nestor cup" or the polychrome inlay of the "lion dagger," or the perforated axe-head from Vaphio, as "illustrations" of Homeric episodes, risked dating parts of the poems earlier than the Trojan War. Whereas the "Ionian" theory would bring down Homeric composition within the period of alphabetic writing, the discovery of the Cretan scripts suggested a Minoan archetype, from which Homer, or a Septuagint of Homers, was to compile eventually a more or less "authorized version" for Greek-speaking "Achaeans."[5]

But the great gulf formerly set by the accidents of discovery between the civilization of the Minoan Age and that of classical Greece has been gradually closed, as that between Schliemann's Troy and his Mycenae has been, by the discovery of intermediate stages, and recognition of the long perspective which Greek folk-memory demands, no less than the documentary record, or the sequences of artistic style. That the cumulative evidence of many small discoveries has not been so fully appreciated for the centuries after the Fall of Cnossus, as for those which preceded it, has resulted mainly from the smaller artistic value of the finds in the estimation of museums and connoisseurs, whose control over scientific exploration has been at times quite as disconcerting as that of insurgents or diplomats.

Thus it has come to be one of the anomalies of Homeric criticism that, while philologists have concentrated on the problem of the fate of early traditions or poems after they became established in communities whose foundation dates are in the eleventh century, the more copious supply of archaeological material has come from the districts west of the Ægean, and from the centuries before the thirteenth; that is to say from the "crucible" while it was being charged, rather than from the "mould" after it was full. And it is

the purpose of the present enquiry to collect and interpret the fragmentary data for the period that lies between, when the new alloy was coming into being in the furnace of the "Migration Period."

Contrasts between Minoan, Homeric, and Hellenic Culture

Scanty as these facts are, they are sufficient to modify those sharp contrasts between Minoan and Hellenic culture, which have been a commonplace of Homeric criticism for more than a generation, and to put each of these principal contrasts into a fresh perspective. In the Minoan Age, we have been told, the dead were buried, in Homer they are cremated, in classical Greece both modes of disposal were practiced side by side. Minoans fought with rapiers, thrusting with the point; Hellenic swords were for slashing as well as stabbing; Homeric descriptions of swords and sword-play have been interpreted variously. The Minoan world knew iron only as a rarity and for ornament; the Hellenic used it freely for weapons, and also knew how to make steel, though the best steel came from abroad; Homeric allusions to iron were therefore regarded as "late." Minoan dress, especially for women, consisted of shaped and sewn garments into which the wearers inserted themselves, in the fashion suggested by the Greek word *endumata;* Hellenic dress consisted essentially of *amphiblemata*, wrappers or shawls draped about the body, and needing to be secured by some kind of pin. Hence the significance of the long series of safety pins, and controversy as to the meaning of the Homeric words *peroné*, *porpé*, and *eneté:* were these to be interpreted as *fibulae*, and if so, were they evidence of "late" composition? Once again, Minoan art had its climax in a vivid naturalism; Hellenic only achieved its idealized renderings of human and animal forms alike, after long apprenticeship in "geometrical" design, abstract, mainly rectilinear, and fundamentally skeuomorphic. Were the graphic Hom-

eric similes, still more the descriptions of the shield of Achilles, and the brooch of Odysseus, inspired by Minoan craftsmanship, or the mere imagination of the poet? Or could they possibly be so "late" as to be suggested by Hellenic work or by the "mixed-oriental" style generally assumed as its prototype before Mycenae and Cnossus were excavated?

Each of these five contrasts needs to be reconsidered separately, with such allowance for gradual change, and for overlap of different customs, as the demonstrable length of the transition now makes not only permissible but necessary. Three hundred years passed between the Fall of Cnossus and the "coming of the Dorians"; three hundred more between the foundation of the refugee settlements in Ionia and the first Greek colonies in Sicily. And within the former of these long periods, at all events, Greek folk-memory has enabled us to distinguish at least one other crisis, the coming of the "divine-born" dynasties into peninsular Greece and the contemporary movement of the Phrygian group of peoples into Asia Minor.

The civilization of the Heroic Age, as described in the Homeric poems, differs from that of historic Greece, and differs also from the Minoan world before the Fall of Cnossus. How far and in what respects it differs from its own immediate predecessor, between the Fall of Cnossus and the coming of the "divine-born" dynasties, is less easy to determine, because there is almost no literary evidence, and the material evidence is difficult to classify, owing to the rarity of date-marks and the local variations of style.

Homeric Warfare, Armor, and Weapons

In the Homeric poems, we see peninsular Greece,—or rather its eastern, southern, and western coast districts—inhabited by distinct regional peoples, some of whose contingents are differently armed and clothed. But almost all have the regional names borne in historic times by the dis-

tricts where they live.[6] All these districts alike—or at all events all that take part in the Trojan War and are included in the Homeric *Catalogue* of contingents,—are ruled by dynasties recently established, and distinct in antecedents and interests from the mass of the population; many of them are "divine-born." Each of these kings has, besides his territorial contingent—which does not care about the war, and counts for comparatively little in the narrative of it—a smaller escort of "companions" personally devoted to himself, sometimes including adventurers from elsewhere; exiles, fugitives, broken men, as well as relatives and tribesmen.

In the poems as we have them, the warfare and military equipment vary. Sometimes the fighting is single combat between chieftains who go into the field of battle in light two-wheeled chariots, drawn by two or four horses, but alight at close quarters and fight on foot, wearing a huge shield of flexible leather, stiffened by a bronze rim, and slung over the left shoulder so as to hang in front of the body, leaving both arms free to wield a long thrusting-spear. Sometimes they carry two throwing-spears and, after hurling these, come to close quarters with bronze swords, sometimes thrusting, sometimes slashing. At other times, there are close-ranked companies of men, with bronze helmets and greaves, a round parrying-shield on the left arm, and a single thrusting-spear; sometimes body armor is worn, of padded linen, or bronze plates. Sometimes again there is mixed fighting, in which heroes in their chariots meet, car to car, or charge through the ranks of foot soldiers. That these are distinct modes of fighting, and that the use of a round parrying-shield, alone or with breastplate and greaves, was coming in, while the huge body-shield was going out, is clear from passages in which a description of body-shield fighting includes an allusion to a breastplate; this both interrupts the grammar and makes nonsense of the narrative, which is quite clear when the breastplate line is omitted. There is

not, on the other hand, any passage where similar confusion results from superfluous mention of the body-shield. Reichel's inference from these passages[7] that the *Iliad* and *Odyssey* were originally composed at a time when only the body-shield was in use, that all allusions to breastplate and greaves result from reworking at a later date, and that other passages apparently describing the round shield originally referred to the older type, was a notable application of the new archaeological evidence to literary criticism. But it underestimated the complexity of the problem, and later discoveries have made it certain that the round shield began to be used much earlier than Reichel had any reason to suppose; not only by the Sea-raiders in the time of Rameses III, whom we have already seen to be contemporary with the traditional date of the Trojan War, but by the Shardana mercenaries of Rameses II two generations earlier.[8] Even, therefore, if the Homeric poems were composed as the war went on, they were being made for people whose neighbors and contemporaries, if not some of themselves, were familiar with the round shield, and slashing-sword;[9] and also with bronze greaves, an example of which has been found in a grave at Enkomi in Cyprus belonging approximately to the same period.[10] When the body-shield went out of general use, is less easy to ascertain, for there are ill-drawn representations of warriors wearing large shields, slung so as to leave both arms free, considerably later than the time of Rameses III.[11]

With these preliminary cautions, the Homeric evidence about armor and weapons, the date and circumstances of which have been so long discussed indeterminately as a problem of literary criticism, will be best appreciated as commentary on the archaeological evidence for some actual types of equipment of which the dates and distributions are approximately known.

In all questions of armor and weapons it must be remembered, first, that in a period so long and so troubled there was every inducement to improve equipment, both by invention and by borrowing. Also, among independent clans or free companies of adventurers, there was freedom of initiative in the choice of weapons. The result is apparent in the Homeric armory. The cumbrous Minoan "body-shield,"—either cylindrical "like a tower" as worn by Ajax of Salamis, or "fair-circled" and "full of bosses" like other representations of the flexible "figure-of-eight" variety, certainly persisted far into the Early Iron Age, alongside of the round parrying-shield of Hellenic times. This, on the other hand, is represented, in several varieties and sizes, as early as the thirteenth century on Egyptian pictures of Sea-raiders and on the ivory draught-box from Cyprus where it has a rim "full of bosses," and is associated with an unmistakable leaf-shaped sword, and with a boar's-tusk helmet like that of Meriones, so carefully described in the *Iliad*. But this helmet was an old type, for it is shown on gems from the shaft-graves at Mycenae, which were closed not later than 1300 and probably earlier. That it was at one time not unusual is clear from the frequent representations of it. That it had gone (or was going) out of fashion, is clear from Homeric interest in its construction.

Greaves, too, go back to the shaft-graves, though not necessarily more solid than would serve as shin-pads to take the jostling of the body-shield; on the other hand, warriors armed with the round shield are sometimes without them. And the so-called "Carian armor," on which the classical "hoplite" outfit was remodeled in the eighth century, with its solid helmet covering the face, its fore-and-aft crest on the headpiece itself, not on a spike or knob, and its fully developed bronze greaves, is recognizable earlier outside the Ægean, and on its southwestern border, than in peninsular Greece; on Assyrian reliefs, on Cypriote terra cottas, on the bronze bowl from Amathus in Cyprus.

On the whole, since the problem of Homeric armor was first stated by Reichel in 1894, new finds have had the result rather of pushing up the date for the introduction of the hoplite equipment, into a long period of overlap and transition, than of bringing down that at which Minoan armament went out of use. The so-called "Boeotian shield," which combines the profile of the 8-shaped body-shield with the convenience of a handle-bar, may very likely be a Theban (perhaps even a Cadmeian) invention; for we have seen that the Cadmeians perpetuated and probably reinforced Minoan culture in that region of the mainland.[12]

Minoan and Homeric Palaces

As with armor, so with dwellings, the evidence, scanty enough, is yet sufficiently varied to be perplexing. The Minoan "palace" plan, of numerous suites of rooms opening onto a court or terrace, with light-wells illuminating and ventilating the innermost chambers, was already supplemented in the mainland castles by a single great living room, approached from the court through a portico and anteroom, central-heated by a permanent hearth in the middle of the floor, the smoke from which escaped by a louvre or clere-story supported by four columns, and covered by a gabled or pyramidal roof.[13] This "mainland palace" is described in close detail in the poems, with the seats of honor set against the columns, the numerous guests served at separate small tables, the chance beggar crouching on the raised wooden threshold of the great door, and the portico available for a boxing match, or sleeping porch for unexpected visitors. But in historic Greece this arrangement of hall, vestibule, and portico only survived in the temple-dwellings of the gods; ordinary families lived in houses of quite irregular plan much more closely related to the Minoan courtyard-houses, and in particular retained in place of the "mainland" living room a much diminished

sun-porch or alcove opening directly onto the court.[14] And this type may still be seen amongst the older houses of Cyprus, Crete, and other islands.

In this department of life, it seems clear that a simple dwelling consisting of a single living room well protected from bad weather by vestibule or portico or both, and provided with a permanent central hearth—suited, therefore, to a climate colder and moister than that of the Ægean—was intruded into an older and more complicated establishment, of courtyard plan, itself probably combining features borrowed from the Minoan and from the "gray-ware" cultures; that it remained customary, at all events for houses of chiefs, until the age described in the poems; but that this makeshift disappeared with the "divine-born" dynasties, and was replaced for human use by the older Ægean arrangement; while the gods, whose appearance, habits, and ritual we have already seen reason to recognize as of northern origin, betray also a northerly mode of life, in the temples with free-standing living-room and portico, which their worshipers now provided for them, and also for the more important heroes by the side of the tumulus which contained their mortal remains.

Disposal of the Dead: Burial and Cremation

In the disposal of the dead, the poems disclose a state of things all the more perplexing because it is so precisely described. A Homeric warrior killed in battle or by accident on a voyage, is burned with his belongings; the remains are collected into an urn and buried under a mound of earth, which, carefully shaped to a circular form, is sometimes surrounded by a ring of stones, and in one instance surmounted by an oar to mark a seaman's resting place. Such mounds were still shown, in classical times, on the plain of Troy and elsewhere, as the tombs of particular heroes, and similar cremation-and-mound-burial was still practiced,

though not universally, in classical Greece. The word *tymbos* "tomb" certainly meant originally a "mound," not a "grave"; and the word *thaptein*, used both for Homeric and for classical funerals, is more probably connected with *tephra* "ashes" and other words for "burning," than with *taphros*, "trench," though grave burials and other kinds of inhumation were practiced in classical as well as in Minoan times.[15] Once, in the *Iliad*, when a dead warrior is to be conveyed to his own far country, an odd stem, *tarchu-* is used, which has been thought to refer to some way of preserving the corpse, because a word *tarichos* was applied in classical Greek to pickled fish and to Egyptian mummies.[16] But in Homer the *tarchu-* rite comes after the journey, not before it, and is practiced also when a man is buried on the spot; it is therefore probably the same rite as is described in the later dialect of Cyprus by *terchnija*, and elsewhere by *tarchea*, though it is not now possible to ascertain what this ceremony was.

Of this Homeric ritual of cremation we have to note, first, that it is quite different from Minoan usage; secondly, that in classical Greece it is only one of several contemporary customs; and thirdly, that it closely resembles practices which are widespread in regions north of the Ægean.

The earliest inhabitants of the Cyclades, of Crete, and of all districts of the Greek mainland, buried their dead primarily in surface graves, often lined and sometimes roofed with stone slabs, but (like many modern Greeks) they frequently transferred the remains later to charnel houses, some of which in Crete were of "beehive" construction.[17] Sometimes, in the Cyclades, and on sloping ground, rough "beehives" were made for the primary graves. In the great mainland settlements, "beehives" more or less magnificently built, with architectural façades, were used for primary interments, and for repeated burials, the former occupants and their gear being removed or swept to one side. It is not

clear whether the shaft-graves at Mycenae are a glorified survival of primary interment in cist-graves, or the adaptation of cist-grave construction to provide a charnel-house for the discarded contents of the splendid "beehives" near by. For unfortunately the shaft-graves were opened by Schliemann before such a question could be asked, and the record of excavation is inadequate. The great variety of their contents, however, is in favor of the view that they are secondary deposits; the decoration of the greater "beehives" dates them not appreciably later than the contents of the shaft-graves; and the evidence hitherto adduced in support of a later date for these "beehives" proves too much, while it is consistent with the view that though of early construction they were violated at a quite late period and repaired for the use of still later occupants (p. 284). The legend, moreover, that the "treasure house" built by the wizard Trophonius for Amphitryon of Thebes (p. 328), in the generation 1260–1230, was "closed by a single stone," looks like a myth told about a "beehive" of which the capstone had been displaced, but the real door was unviolated.[18] The classical names—"Treasury of Atreus" at Mycenae, and "Treasury of Minyas" at Orchomenus—show that they had already been opened and found to contain much gold; and it is certain, from the later objects found in damaged "beehives" during modern excavation, that they had actually been opened (and perhaps re-used) quite early in the Iron Age. But apart from the standing epithet of "golden Mycenae," and a single allusion to the exceptional wealth of Orchomenus, there is no hint in the poems of such burial places, nor of any such ritual of interment as was universal even in the latest Minoan settlements; for though the construction of "beehives" at Mycenae ceased some while before the destruction of the "palace" and fortress, interment went on to the last in rock-cut chambers of simpler form, with the same ceremonious equipment on a more modest scale.

The construction of corbel-vaulted buildings in historic times, on the same principle as a Minoan "beehive," is illustrated by the fine chamber which encloses the natural spring of Borinna in the island of Cos; by another in Myconos; and by the ancient well-house, or tomb, on the Capitoline Hill at Rome, which was attributed to the days of the Etruscan kings, and was remodeled later for use as the public dungeon. But these scattered examples only prove the subsequent use of a particular mode of construction, and are all so much later that continuous tradition cannot be assumed. In the coast districts of Caria, near Halicarnassus, however, there is a series of "beehive" tombs, differing only from the Mycenaean in being above ground, with a doorway on the ground level; they are enclosed, that is, not in solid earth, but in a great mound of stones, held together externally by a ring-wall and cornice, sometimes low, sometimes nearly as high as the chamber within.[19] One example, of which the masonry seems to be later, is rectangular and barrel-vaulted, and is contained in a large earthen tumulus on a conspicuous ridge. Several have side chambers, like the larger Minoan "beehives," and one of the largest has two stories of them, with a staircase in the substance of the mound. As all the known tombs in this Carian group have been despoiled, their date is uncertain; but one of them lies close to a cemetery containing many cist-graves under cover-stones level with the surface of the ground, and also small walled enclosures containing bones and tomb equipment, partly degenerate Minoan, partly primitive Hellenic.[20] Now in Greek folk-memory, the people of Caria had once occupied the islands of the Ægean, and had been twice expelled thence, once by Minos, king of Crete, some while before the Trojan War, once again, after reoccupying them, by Ionian colonists from Attica and its neighborhood. As the earlier Minos belongs to the generation of 1360, and the later to 1260, we cannot be certain as

to the date of the first expulsion; the second is approximately dated by the foundation of the Ionian colonies about 1030.[21] But whatever their date, here are two occasions when people from Minoanized regions of the South Ægean were driven onto the Carian coast and remained there; and their significance is all the clearer, in view of the aggressions of Attarissyas of Ahhiyava on this region of southwestern Asia Minor, and the reinstatement of the native chief Marravattas, whom Attarissyas had displaced. In the Homeric *Catalogue*, Priam's Carian allies are described as "foreign-speaking."[22]

Similar chambered mounds, of the Carian type, occur also in great numbers in Lydia, north of Sardis. The largest of them, with a well preserved ring-wall, and remains of a group of ball-topped tombstones on its summit, is the "Tomb of Alyattes," described in detail by Herodotus,[23] and attributable at latest to the early sixth century. Its chamber had been despoiled when it was explored, but still contained vases of a fabric now known to be characteristic of Lydian tombs at Sardis itself, of which the date is not yet accurately fixed, though they are certainly earlier than the period of Ionian influence in Lydian art.[24] As the Greek "List of Sea-Powers"[25] assigns to the Lydian a "sea-power" for nearly a century after the Trojan War—Eusebius gives it as from 1168 to 1088—and as this "sea-power" must have ended with a withdrawal, like that of the Carians, from oversea dependencies onto the mainland, there was occasion, here too, for introducing a Late Minoan type of funerary chamber into the western coast region of Asia Minor. What reason, also, was there for the Greek belief that the rulers of Lydia from about 1190 to 685 were in some sense "children of Heracles," and that Heracles himself, one of the heroes of the Amazon War between 1260 and 1230, sojourned for a while in Lydia "serving the queen" thereof?[26] To the significance of such traditions, we are recalled once

more by the Hatti records of "Æolian" attack on Lesbos farther north, a century earlier, and of the doings of Attarissyas, a real contemporary of the traditional Heracles.

Having thus traced onward, in later examples, the distribution of the Minoan custom of interment in false-vaulted chambers, till it coalesces on the west coast of Asia Minor with the practice of burial in an earthen mound, with or without previous cremation, we are free to return to the Homeric custom of cremation, with the assurance that whatever its origin, and its vogue among Achaeans and Trojans—for Hector's funeral is a duplicate of that of Patroclus—it did not wholly displace even so characteristic a mode of interment as that in "beehive" tombs; still less the practice of burying in rock-cut chambers, which persisted into classical times. Once more, the multiple origin of the Greek people is demonstrated by the variety of its funeral rites.

The Geographical Distribution of Cremation

At first sight, the funerary practices of peoples in the earlier stages of advancement seem to vary indefinitely and inexplicably; at most a broad divergence is perceptible, according as people believe that a dead person can, or cannot, hold further intercourse with the living. Where it is believed that he can, there are further alternatives. Either such intercourse is desired and assisted, or it is resented and means are found to obstruct or preclude it. A minor complication results when the supposed wishes of the deceased are taken into account; as for example, when the ghost haunts, reproaches, and annoys the living until they complete the ritual which assures to the "perturbed spirit" its "eternal sleep," or the desired translation to "another world."

In interpreting ancient modes of disposing of the dead, it must be remembered that archaeological evidence usually reveals only the last stage of the ceremony, after which the remains are left undisturbed because there is nothing more to be done. Only occasionally is there a glimpse of successive phases in a procedure which among living peoples is sometimes a long one; in the early Ægean for example, as in modern Greece, primary interment was followed by transference of bones and relics of equipment to an "ossuary" or charnel house; and in early Italy there was sometimes an interval before the primary grave was filled in.[27] But even with these qualifications, archaeological evidence supports the broad distinction between practices which hasten the destruction of the corpse, and those which aim at conserving it, and ministering thereby to the well-being of the deceased, who is conceived as retaining some connection with it.

In the special instance of cremation, the whole enquiry is complicated further in two respects. First, cremation requires considerable expenditure of fuel; the geographical distribution of this practice is therefore controlled by the fuel supply; and the gradual disuse of cremation, of which there are several instances (pp. 395–7), may result less from a change of belief than from the price of firewood. On the other hand, mere cremation, with intent to destroy utterly the discarded tenement and thereby banish any vestige of personality which may have survived death, leaves so little trace, that the failure to discover any other mode of disposal, in a region otherwise adequately explored, affords a presumption that here the dead were cremated. In the absence, however, of positive evidence, such as the discovery of a burning-ground, it is not possible to distinguish between cremation and mere exposure of the corpse to "dogs and birds," as happens in war, or the so-called tree-burials and platform burials of some primitive peoples.[28] It is necessary to draw attention to these gaps and ambiguities in the evi-

dence, because the special problem of funerary practices in Greek lands has sometimes been treated as more confidently soluble than it really is.

The practice of cremation occurs sporadically in many distant parts of the world, but as these instances are all of modern date, and not demonstrably due to ancient use, they may at present be left out of account; for either they are of immemorial antiquity and of independent invention, in which case, owing to their remoteness, they cannot be claimed as having originated anything in ancient Europe or the Near East; or else, if they are claimed as of later introduction, their source must be sought for elsewhere, and may be ultimately in the practices under discussion.

For example, cremation in Tasmania, parts of Australia and the Pacific, and in southern India, either is totally unrelated to cremation among intrusive Aryans in the Punjab, or is at least as likely to be derived from Aryans as is Aryan rite to have been borrowed from Indian aborigines, in face of literary evidence that cremation is primitive Aryan practice. Similarly cremation in Siberia, where the ground is too hard-frozen for habitual interment, covers the rare examples of cremation in America, seeing that the actual "aborigines" of the New World have all entered it through the Arctic avenue from northeastern Asia, where similar conditions prevail; and Siberian cremation itself either is a local invention to meet the special circumstances of frozen country, or else is a concomitant of that pastoral habit which refers many Siberian peoples to an origin in some park-land farther south. Apart from these sporadic instances, we have only to deal with a single widespread but fairly coherent group of practices, in the northwest quadrant of the land mass of the Old World.

There is not, of course, any necessary connection between physical breed and funerary observance; but the three primary groups of "white races" certainly came into

existence in conditions of long seclusion from each other, each in its respective regional habitat (Chapter II). It is therefore noteworthy, first, that there is no trace of early cremation among people of the "brown" race, in Arabia, North Africa, or on the Atlantic seaboard, except in the far northwest, where it occurs very rarely among the "long-barrow" interments of neolithic Britain. But here, though no absolute date can be given, the relative date of these interments is not early enough to preclude intercourse with continental regions which were practicing cremation before the end of their own Stone Age. This applies *a fortiori* to examples of cremation among the "round barrows" of Britain, which represent an immigrant culture from the North German Plain, and among the tombs of Brittany; for both are later than the "long barrows," and of a culture which was in contact with the lands round the Baltic.

Similarly cremation sometimes occurs among the later tombs of the "megalithic" culture in northwestern Germany. But as this culture originated oversea and was propagated inland, and as its original and long unqualified practice was burial, this instance of cremation also seems referable to contact with some other culture farther inland. Now, in the burial mounds of the Rhine valley there appear also, along with cremation, skulls of a "northern" type, and also perforated axe-heads of styles which are intrusive in western Europe. Again in tombs of the *Schnur-keramik* culture, cremation comes in so gradually that it has been conjectured that it originated here; a fire, already provided by custom for cooking a funeral feast, being used in some emergency to destroy the corpse when the rest of the ceremonies were over.[29]

In the neolithic "First Danubian" culture, again, cremation occurs locally and rarely, in Bohemia and on the Neckar. In the "Second Danubian" culture it is found throughout Saxony and Thuringia and along the Elbe, a great avenue into the highlands from the northern plain;

and also in Bavaria, where it spreads gradually, and continues to spread in the subsequent Bronze Age. Most significant as to its relative date and immediate origin is the occasional adoption of it by the "bell-beaker" folk, who were intruders from beyond the Vosges into the Upper Danube, and had always buried their dead till they reached Moravia from the southwest. This looks as though cremation was spreading, perhaps by several avenues, into the Danube basin, where it had so wide a vogue later; in Hungary, too, it appears in the "Lengyel" culture.

Among the lake-dwelling peoples of the Alpine valleys there is some reason to believe that cremation began very early. Yet apparently it was not primitive in this culture, as was formerly supposed, and there was certainly some intrusion of Danubian culture up the more easterly of the Alpine valleys, at a subsequent stage. Consequently it cannot be assumed that the cremation prevalent in regions whither the lake-dwelling culture spread later, for example among the "terremare" folk of the Po valley, is derived from the Alpine lake-dwellers, primarily or solely; it may have been acquired both by the lake-dwellers and by the "terremare" folk independently, in or from the Middle Danube valley, where we have already noted its presence.

Next comes the question, whether the custom originated in the Hungarian section of the Danube valley, or was propagated in this region from some farther source, as the variability of ritual suggests;[30] and if so, whether it came out of the forested highlands, to the south and southeast, that is, from southeastern Europe and eventually from Asia Minor, or from beyond the Carpathians, and eventually from the cradle-land of the "northern" breeds.

In favor of origin within the Mountain-zone there is the use of cremation by "lake-dwellers" in all districts of the Alps, and the early spread of it among the "terremare" folk in the Po valley; there are neolithic cremations at Gezer in

Palestine, where the use of metal began very early, probably not later than 3000 B.C. and perhaps a good deal earlier;[31] there is the cremation of kings of Judah, but this comes so late, and is preceded by so unanimous evidence of early interment in Israel, that it is only of weight as evidence of contact; and there is the curious "fire-necropolis" at Surghal in Babylonia which may represent the practice of the neighboring highlands, as its ritual is neither Semitic nor local. There are the general considerations already noted, that cremation requires copious fuel, and is therefore likely to have originated in a region where trees were plentiful; and that as the process of cremation leaves practically no trace, the repository may be inconspicuous and easily overlooked, even when there is subsequent storage of the ashes. It was long, for example, before the "urn fields" of North Italy were noticed, and still longer before they were recognized as the cemeteries of the "terremare" folk. But the mere absence of other kinds of tombs does not prove cremation.

On the other hand, it is certain that throughout Syria and in parts of Asia Minor, excavated chamber tombs, probably replacing a primitive custom of cave burial, were regularly used from very early times. In Cyprus, where alone there is at present copious and coherent material, such chamber burial goes back to the beginning of the Bronze Age, and this begins earlier than the dynastic régime in Egypt about 4000 B.C. It is not certain, however, how far such chamber burial extended to the northwest, though it seems to be primitive in Paphlagonia and North Phrygia. The case therefore for asserting that cremation originated among people of the Alpine-Armenoid group is not so strong as has been sometimes supposed.[32]

The alternative, that cremation originated among peoples of "northern" ancestry, is at first sight improbable. If these are the aboriginal population of the Eurasian grassland, (pp. 37–9), it is difficult to understand how such people could

have burned their dead, in view of the dearth of timber: witness Herodotus' humorous description of "the ox cooking himself" in Scythia, the bones serving for fuel as among modern nomads; and in fact the early mounds on this grassland contain interments only.

But the Aryan invaders of India, who originated on or near this grassland, and were pastoral nomads, certainly burned their dead, and buried them under earth mounds like those of the "kurgan" folk. Later the practice of mound burial was superseded by other modes of disposal, merely scattering the ashes, or casting them into rivers; and here, as elsewhere, advance into comparatively woodless country intersected with great rivers led to the modern Hindu ritual with burning on the river bank, perfunctory and often incomplete. Former cremation among Iranian-speaking people is demonstrated by the prohibition of the practice in Achaemenid times, as a corollary to Zoroastrian fire-worship. The funerary customs of the Kassites, the Mitanni, and the Hatti, are still undiscovered, but the Surghal "fire-necropolis" in Babylonia, which is neither Semitic nor Sumerian, may turn out to belong to someone of Indo-European antecedents. Finally, in the Homeric poems, both Trojans and Achaeans burn their dead, collect the ashes in a vessel, and bury it under a mound, in close accord with early Aryan practice in India.

At first sight there is a paradox here, that people originating from treeless countries are found to practice cremation habitually. But the explanation is simple. Unlike the southern grasslands of North Africa and Arabia, the Eurasian Steppe, though it abuts abruptly enough on the northern foothills of Persia and the Caucasus, passes northward by comparatively gentle transitions through park-land into the forest zone. Indo-European vocabularies show primeval familiarity not only with the elements of agriculture (which is not practicable on mere grassland) but

with fruit trees, and also with wheeled vehicles, boats, and other wooden structures. Indo-European-speaking peoples therefore had been very early habituated to park-land régime, where wood, and consequently fuel, was available. Even on the steppe, as we have seen, the practice was immemorial, of protecting interments with mounds of earth, to prevent disturbance of the body by carrion-eaters. But whereas on grasslands carnivorous and especially carrion-eating animals and birds are few—because there is little sustenance for them—, they abound in park-land, because game is abundant there; and especially they haunt the encampments of herdsmen, and prey upon diseased animals. So long as such people were sedentary, neighboring tombs were comparatively safe; but how were men to protect the remains of their ancestors, after becoming migratory themselves, as these people certainly were?

It was a simple and obvious precaution to burn the corpse, and bury only the ashes in a mound of customary size, commensurate with the dignity of the deceased: and we are now in a position to note that not only the Indian, Iranian, and Homeric examples of habitual cremation, but all the more sporadic instances already noted in central and northwestern Europe, lie separated from the Eurasian grassland by broad zones of park-land. Moreover, in Europe, as in western Asia, all the cultures within which cremation occurs either sporadically, or as the regular custom later, are acquainted with the domesticated horse, and most of them demonstrably with the use of wheeled vehicles as well. Cremation in later mounds on the grassland itself need not surprise us, in view of the facility given by horse-drawn vehicles for rapid and easy change of abode, and especially for oscillatory migration, into marginal park-land and back again; and such "houses on wheels" were not only familiar to Greek travelers north of the Black Sea in later times, but are illustrated by clay models and other representations of

them among the tomb furniture of many regions and periods and especially in a quite early "kurgan" in the Koban region.[33]

There is therefore no reason to doubt that, whether or not the earlier inhabitants of the Mountain-zone edge of the park-land were practicing cremation already (which cannot be wholly excluded in view of the sporadic instances given above) the custom, as recorded in northern India, Iran, central and western Europe, either characterizes people recently arrived from the margins of the northern grassland, or results from contact with them. And the fact that cremation frequently appears without other change in material culture, finds its explanation if such contact took the form of the intrusion of small bodies of men tenacious of their own funerary customs, but unaccompanied by any considerable number of their own women, and consequently dependent on those among whom they came, for most of the conveniences of life. On the Rhine sporadic cremation, accompanied by "northern" skulls, and perforated battle-axes of eastern type, is even clearer evidence of such intrusion; while the spread of eastern battle-axes into regions which either did not adopt cremation at all, or adopted it later, hints only that some invaders were less scrupulous than others in their disposal of the dead.

Ægean Funerary Customs

In the light of these general considerations, the funerary customs of the Ægean are fairly easy to discuss, though they occasioned much controversy before evidence from other regions was fully available. In Crete, as in Leucas and Lycia, there are neolithic cave burials; but from the beginning of the Bronze Age onward—as we have already seen—the habitual usage was burial in surface graves, with or without transference to secondary repositories. The Asiatic habit of burial in excavated chamber tombs, approached

either directly by a short gangway, on a hillside, or by a flight of steps, or a shaft, in level ground, is traceable in the Cyclades quite early, which accords with evidence already noted (p. 233) as to Asiatic influence there; and in Crete, at several periods of the Bronze Age. On the mainland, it is presupposed in the design of the great "beehives" at Mycenae, Orchomenus, and other sites, and more explicitly in the later chamber tombs of Argolis, Attica, and Cephallenia. Chamber tombs occur also beyond the Ægean, sporadically, in Sicily, Malta, Tunis, and Sardinia; though it is not at present possible to connect these with the culture either of the Ægean or of any Asiatic region, except by the occurrence of "prospector" skulls and trough-spouted jugs in Sardinia.[34]

On the other hand, some while after the general adoption of cremation in the Hungarian region (which seems to have occurred about 1500) and rather late in the disturbed period of Ægean culture which follows the Fall of Cnossus about 1400, sporadic cremations are found in Crete, Thera, Salamis, and in coast-land Caria; and this sporadic cremation continues into the Early Iron Age, and spreads, though it is never dominant.

In historic Greece, cremation, chamber interment, and surface graves were in use side by side, and by different families within the same community.[35] Hence the later ambiguity of the Greek word *thaptein* already noted (p. 381). So, too, in Thrace, Herodotus describes alternative rites; in one, they "merely hide in the earth," in the other, "bury, after burning to ashes"; in both, a mound was made, there was a preliminary "wake," and afterwards "all kinds of contests," as at the funeral of Patroclus in the *Iliad*.[36] That the difference of ritual corresponded with the difference between Thracians who were "well born" and tattooed—presumably with their "coat of arms"—and those who were neither, and that cremation was the nobler end, is probable, because in neighboring Macedon the kings were cremated.

At Sparta though royal funerals, "as among the barbarians in Asia," were accompanied by beating of kettles, personal disfigurement, public wailing and panegyric, and lying-in-state, Herodotus does not mention cremation, though he uses the same Homeric verb *thaptein* as for the Thracian funerals. Other references to Spartan funerals make it certain that inhumation was customary,[37] but no cemetery has yet been found at Sparta.

In view of the intrusive character of so many cremations, it is easy to understand the widely distributed instances of reversion from burning to burial, at Gezer at the beginning of the Bronze Age, at Carchemish in the eighth or seventh century, at Gordium in Phrygia, and in Macedonia in the later mounds; in Etruria and other parts of Italy, after the Villanovan intruders had become assimilated; and in Denmark and Scandinavia, during the Early Iron Age. Nor are all these reversions of late date; and one of them, in Greece itself, needs closer examination, partly for this reason, partly because the finds themselves have been so strangely interpreted.

Early Cremation Tombs in Leucas

The complexity of the problem in peninsular Greece is illustrated by a remarkable series of graves in the island of Leucas, separated from the mainland of northwestern Greece by a channel so narrow that after Roman times it ceased for a while to be navigable. Here, in the Nidri lowland, three stages can be distinguished, and approximately dated by the contents of the graves, though allowance has to be made for some backwardness of development at so great a distance from centers of Ægean culture.[38] In the first stage, profoundly influenced by pottery and bronze work of Cycladic origin, such as characterizes the "smear-ware" settlements of the Corinthian Isthmus and Central Greece (for example, Orchomenus II), each burial on "site R" consists of a cir-

cular area, surrounded by a low ring-wall of rough masonry from twelve to thirty feet in diameter. Within this ring-wall the tomb equipment, and probably the corpse also, was first burned and then packed into a large clay jar, which was laid in a central cavity, and covered with a low mound of earth and rubble, to the full capacity of the ring-wall. The condition and posture of the bones show that the burning was incomplete, and perhaps only formal. Sometimes there is little or no trace of the burning except bits of charcoal, as though the fire had been built elsewhere; but no burning-places have been found except within a ring-wall. In some of these funerary mounds there are also cist-graves lined with stone slabs and containing skeletons in contracted posture, which do not seem to have been cremated in the ordinary sense, though the discoverer claims that they have been "toasted" at a fire, to preserve them. These cist-graves are certainly later than the mounds in which they lie, but their contents belong to much the same culture as the jar burials.

A second stage, on "site S," on the other side of the valley, shows a similar mound and ring-wall, but of larger dimensions and containing neither burning-place nor jar burial, but thirteen cist-graves with contracted bodies and equipment influenced by the "gray-ware" culture of Orchomenus III, clearly therefore later than the cremation graves. Of these cist-graves, No. 9 was superposed on No. 8, and No. 14 was found in the upper of two annexes constructed successively against the ring-wall, as though the burying-place had been enlarged.

Thirdly, near this circular monument lies a rectangular enclosure containing eight similar cist-graves beneath a low mound, supplemented by a rectangular annex containing one central cist-grave and a group of bones in what seems to have been a mere hole, evidently subsequent. A few scattered cist-graves in the neighborhood belong to this

second stage and probably represent humbler contemporaries; one of them was surmounted by a small cairn of stones, without enclosure wall.

Interpretation of this remarkable series of burials has been obscured by the discoverer's conviction that the cremation graves are later than the interments; so much later as to be ascribed to "Achaean" occupants of Leucas in the Homeric Age. Apart from this preconception, there is nothing to traverse the evidence of the pottery and bronze implements, that the cremation graves "R" belong to the "smear-ware" culture, the circular ring-wall "S" with its cist burials to an early stage of the "gray-ware" culture, and the rectangular enclosure to a later stage when the foursquare construction characteristic of Orchomenus III had been introduced, in the wake of other industries. The rarity of Cycladic "painted ware" in the cremation graves, where it might have been expected, may well be due to the remoteness of the site, but the complete absence of Mycenaean pottery can only be due to the pre-Mycenaean date indicated by their actual contents, seeing that in the neighboring island of Cephallenia there was a regular settlement in Mycenaean times.[39]

What is significant therefore about the cremation ritual of Leucas is, first, its very early date, anterior to the introduction of "gray-ware" culture; secondly, its association on the one hand with jar burial, which is fairly widespread in the South Ægean, on the other with funerary mounds consolidated by a ring-wall of masonry; thirdly, its supersession by interment in cist-graves, such as are characteristic in the "gray-ware" culture, whereas ring-wall and mound to conserve these cists lasted rather longer, before giving place to a rectangular enclosure. From the burials in Leucas, then, it is certain that in some district of northwestern Greece, cremation was associated with mound burial very much earlier than the general spread of cremation into dis-

tricts round the Ægean; and that occasionally, as in Leucas, those who practiced this cremation-mound ritual spread temporarily as far as the seaboard, without, however, establishing themselves there permanently.

The similarity between the cremation ritual of Leucas, and the funeral ceremonies of Patroclus and Hector as described in the *Iliad*, naturally led to the assumption that the tombs in Leucas were "Achaean"; and though, as we have seen, this interpretation is precluded by grave discrepancy of date, and by the disuse of cremation in Leucas long before the Homeric Age, it is nevertheless possible that the Homeric custom may have been derived from the same ulterior source, somewhere in the northwestern highlands; and this possibility has to be kept in view, in discussing the only close counterparts to Homeric ritual that fall also within the fairly narrow limits of date which we have already seen reason to assign to the Homeric Age.

Numerous mounds in the neighborhood of Troy were attributed in classical folk-memory to heroes who "fell in the war"; but those which have been examined have suffered from inexpert dissection, and also from repeated use for cremations in various later periods. Moreover the *Iliad* itself mentions conspicuous mounds in the plain of Troy, which were already ascribed to earlier personages;[40] so that some of the mounds still visible may be earlier than the "war-generation." Farther south in the western coast-lands of Asia Minor, the chambered tumuli of Lydia and Caria repeat externally the structural features of the ring-walled tombs in Leucas. But their contents, as we have already seen (p. 383), are quite different, a false-vaulted chamber replacing both jar burial and cist-grave; there is no evidence that any of them were used for cremations; nor are any of them dated by their contents so early as Homeric analogies would require. At best they are, so far as we know, a survival, with certain features accentuated, from a procedure

like the Homeric, in which an earth mound was consolidated by what is described in the *Iliad* as "placing foundations in front."[41] The chambered tumuli at Gordum in the Sangarius valley far up-country from Troy, present a further stage of divergence; for they have no ring-wall, and no means of re-entering the chamber. Here too the bodies were not burned until the sixth century (p. 422), but buried with rich equipment.[42]

Cremation at Halos

Within Agamemnon's realm, on the other hand, and in the barony of Achilles himself, which is also specifically the home-land of "Hellenes" and "Achaeans,"[43] the cremation tombs near the small Greek town of Halos in Achaea Phthiotis offer a fairly close parallel; though, as in Leucas, exigencies of continuous occupancy, and more modest resources, have crowded and deformed the monuments, whereas the plain of Troy and the poet's enthusiasm gave free scope to design and construction.[44] At Halos two kinds, and probably two stages, of ritual are found. Close to the town there are cist-graves containing mere burials, which need not concern us here: at a little distance lies the cremation cemetery. Here each separate but adjacent cremation was performed on the bare ground, and each pyre was then covered by its own mound of rubble: but as there were no ring-walls these mounds merged in a single wide platform, of irregular shape. The bones and remains of burnt equipment were not collected into jars or cists, but left as they lay among the ashes. This is clearly the same ritual as at Leucas and in the *Iliad*, only without careful demarcation of each mound and segregation of relics. And whereas the tombs at Leucas are considerably earlier than the Homeric Age, those at Halos are probably rather later, as examination of their contents will show.

Almost every object in these tombs is of high significance. The personal ornaments are of bronze, and include, besides simple rings and bracelets, several *fibulae* or safety pins, not by any means of the earliest types, as we shall see (p. 414). The weapons are a two-edged sword, with flanged grip-plate and more or less "leaf-shaped" blade, a one-edged slashing-knife or cutlass, and a socketted lance-head. These, moreover, are all of iron, not of bronze. The pottery includes forms derived from the old trough-spouted and askoid vessels of Thessaly and Macedon, but there are also jugs and bowls derived from the wheel-made types of the latest Mycenaean period. All alike are painted, moreover, in a new geometrical style with zigzags, latticed triangles, and compass-drawn concentric circles; a repertory simple enough in itself, but strongly contrasted with even the latest Minoan ornaments.

Here then, associated with a ritual resembling Homeric cremation in essentials, but simplified in detail, we have four fresh elements of culture—safety-pins, leaf-shaped slashing-swords, weapons of iron, and geometrical decoration—which must be the starting point of a fresh series of enquiries. For each of these innovations has been acclaimed as characteristic, now of the culture of the Homeric "Achaeans," now of the Dorians who are traditionally represented as the destroyers of the "Achaean" régime. To estimate, therefore, the validity of any of these identifications, each of these new elements at Halos must be separately displayed in its wider archaeological context.

Homeric Dress

That the Homeric poems describe what their composers saw, and original audiences knew, is evident, as we have already seen in matters of warfare from intimate details of anatomy, sword-play, and armorer's craft. That their ac-

quaintance with woman's wardrobe was discreetly slight, is also natural and obvious. Consequently it is not always easy to understand the descriptions of Homeric dress. Nevertheless a few points are clear.

The civil costume of the men in the poems is not the fringed and embroidered loin-cloth and wasp-waisted belt of the Minoan people,[45] but a close-fitting vest drawn over the head like a modern jersey, supplemented by a woolen plaid or blanket, equally serviceable as cloak or for bedding.[46] But archaeological evidence shows a long period of transition. The vest, made of front piece and back piece sewn together with a decorative border, which is continued round the openings for neck and arms, is as ancient as the "mainland palace" frescoes of Mycenae and Tiryns; it is seen under the body-armor of the men on the "Warrior-vase"; it is common in early Hellenic vase-paintings, and occasionally later; and in Cyprus, for general use, it was only superseded in the fifth century.[47] On the other hand the loin-cloth was still worn by athletes "as foreigners still do" when the Olympic Games were well established, and it remained as "full dress" in Cyprus till the sixth century, only slightly modified, with the close-fitting vest tucked into it instead of hanging free.[48]

Corresponding with the men's short close-fitting vest, there was for women a longer tubular garment, fairly close-fitting, of "fine" material such as linen, fastened "down the breast" by some kind of "inserted" clasps, in such fashion that when these were withdrawn, the garment slipped down in confusion about the feet.[49] This is quite different from the jacket-and-skirt of the Minoan palace ladies,[50] which there is nothing in the poems to suggest, except a few allusions to "charming breasts," as boldly displayed in Minoan society as they were discreetly covered in Hellenic. It is quite different also from the blanket-like robe of Hellenic women, but it remained in use in Ionia, and was

remembered as the old-fashioned dress of Athenian women before the "Dorian" dress came in. Herodotus thought it originally "Carian," presumably associating it with the same non-Hellenic culture as the "Carian" armor with its crested helmet and round parrying-shield.[51] It is difficult to distinguish this garment from the immemorial women's dress throughout the linen-using region to the southeast; in Egypt and Syria it is still fundamental: in the Ægean it was worn within living memory in Carpathos, as sole undergarment, and it is the undermost garment that is visible, in Calymnos today.

Unfortunately, the monuments also are as reticent, after the Minoan Age, as they had been explicit earlier. A long close-fitting undergarment appears within the gown of the woman on the "Warrior-vase," and frequently on women of the Early Iron Age both in Greece and in the Levant.[52] Later it was replaced, or concealed, by the blanket-like "Doric" robe; just as, in Homer, a loose heavy cloak was worn by both sexes over the vest, and sometimes fastened with pins.[53] On the other hand the jacket-and-skirt costume of Minoan women, with or without linen underwear, certainly persisted in Cyprus, far into the Early Iron Age, and this is the oldest European dress for peasant women throughout the Mountain-zone and its Mediterranean frontage. It is difficult to interpret many early Hellenic representations otherwise; and the rarity of fibulae in many districts round the Ægean raises the question whether in country places this ancient "highland" costume did not persist throughout classical times.[54]

Homeric dress for men, then, did not include any garment which regularly needed a pin, though pins were sometimes used for a voluminous cloak. Women's dress, on the other hand, did include a garment which was so habitually and necessarily fastened by some kind of pin or clasp that when it was given as a present the necessary outfit of fastenings

was included.[55] This garment, however, was not of the classical "Doric" blanket type, but tubular like the "Ionic" or "Carian," which may have been a survival of it.

This consideration greatly increases the difficulty of assigning a source to the Hellenic blanket costume. Graceful as it became, in skilled hands, and on well-bred persons, it is in itself the simplest and most primitive of apparel. It was, indeed, the same rectangular wrapper which, worn diagonally, and to open in front, had become the Minoan jacket-and-skirt, but became the Doric *chiton* when worn foursquare, and open at the side. With the single exception of a figure on the "Siege-vase" from Mycenae this blanket costume is not traceable on early monuments anywhere in Europe or in western Asia.[56] On the other hand it has remained fundamental and universal all through North Africa among peasantry and nomads alike. The fashion of the pins, which fasten it on the shoulders, has changed since ancient times, as it was changing within those times; but the mode of wearing and adjusting the garment is the same. Now it is difficult to believe that this costume was imposed upon the Libyan women in general either by Greek traders or Roman officials; it certainly was not introduced by the Arabs, whose women have worn immemorially the tubular nightgown, not an open folded blanket; and the alternative is that foursquare draping succeeded diagonal draping in Libya itself, after the latter had already given rise, in the cooler climate of Crete, to the Minoan jacket-and-skirt.

It is uncertain how early the foursquare draping became habitual in Greece. The fibulae give us no help, for the fibula did not necessarily originate with it, as has been commonly assumed. The introduction of the fibula certainly gave new facility of adjustment among the Greeks; but the Roman *toga*, about the origin of which similar questions might be raised, was adjusted without fibula, by skilful draping, such as is practiced in India, Japan, and Hawaii,

and was customary among robe-wearing Redskins, and indeed among Greeks too, for their over-cloaks (*himation*, *chlaina*). But in classical Greece this foursquare garment was known as the "Doric" *chiton*, in contrast with the tubular *chiton*, which was called "Ionic," though it was really Carian and probably came along the coasting-route from an ancient home in Syria. The name *chiton*, however, is not Indo-European, and consequently is less likely to be the name for anything which the Dorians brought with them, when they came, than for something which they found in the south, and adopted. This, however, only increases the difficulty; for if the "Doric *chiton*" is pre-Dorian, and was also not Minoan, it must be either pre-Minoan or post-Minoan. If post-Minoan, it should have been introduced either by the Deucalionids or by the "divine-born" adventurers. As the latter do not seem to have brought their own women—and otherwise we should know more of their language, and less of their marriages—their claim is but slight. If the Deucalionids had had it, Æolic Greeks should have had it, and there would have been no reason to characterize it as Doric. Consequently it may provisionally be considered as a pre-Minoan inheritance, as its Libyan counterpart indicates: and this is confirmed by the only early representation of any such garment on a Minoan monument, namely as worn by men attacking a fortified town with sticks, stones, and arrows, on the well-known "Siege-vase" from Mycenae. Two wear nothing else, others nothing at all; they all seem to be backwoodsmen.

It has been necessary to examine these changes of Ægean costume in detail, because discussions of Greek fibulae have commonly assumed three points:—(1) a necessary connection between fibulae and the "Doric *chiton*"; (2) a northern origin for the "Doric *chiton*," and therefore for all Ægean fibulae; (3) the presence of "northern invaders" wherever fibulae are found, and conversely the absence of such in-

vaders before the first appearance of fibulae in Greek lands. All these assumptions, however, are ill-supported by evidence. The blanket costume, whether draped diagonally or foursquare, is more ancient than the earliest fibulae. The foursquare draping has not been proved to be a northern fashion at all, still less a Danubian fashion. A northern origin for the fibula, as commonly accepted, fits the facts less completely than an Ægean origin, though we shall see (p. 424) that one type of fibula, common to peninsular Greece and the Middle Danube, probably developed in that northern area, and entered the Ægean late and locally. And lastly, the distribution and interrelations of the earlier types of fibulae show no such concordance with the demonstrable routes of invasion as would justify the inference that there is any connection between fibulae and invaders.

Geographical Distribution of Types of Fibulae

We are thus set free to consider Ægean fibulae without further reference to any particular garment that they were employed to fasten, or any movement of peoples or cultures which does not accord with the typological distribution of the fibulae themselves. Fortunately the archaeological material is fairly copious, and the sequence and development of the principal types well established. What is not yet ascertained is the full geographical distribution of some important varieties; and consequently what follows must be regarded as in this respect provisional.[57]

Whatever other clothing people wear, they have occasional need of a loose shawl or blanket, easily assumed and discarded. But such overgarments or wrappers are liable to slip off unless they are secured with some kind of pin. Here is a very simple and general need, easily met by a natural thorn or pointed bone, and eventually by a pin made of metallic wire. Names for this almost universal implement commonly express its use.[58] Such dress-pins easily penetrate

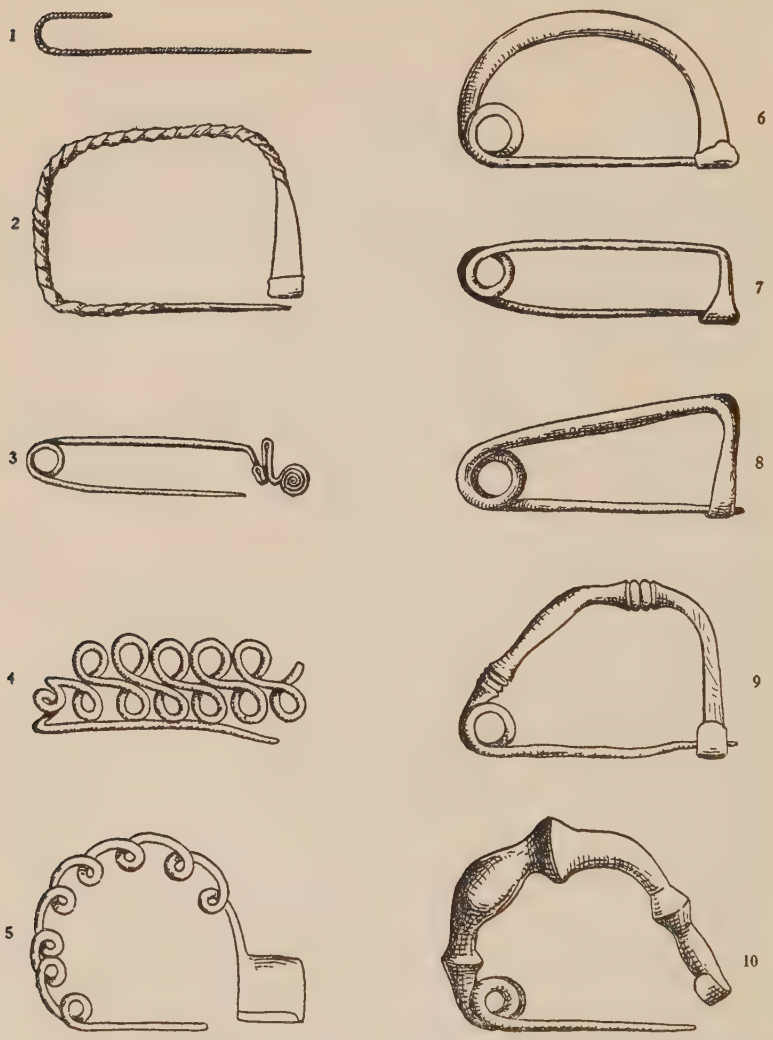


Fig. 14.—Types of Fibulae from Greece and the Ægean.
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1. Blinkenberg *Fibules*, fig. 5.
2. Blinkenberg *Fibules*, fig. 6.
3. Blinkenberg Type I.3a, fig. 11.
4. *Deltion* 1919, p. 117, fig. 33.
5. Blinkenberg Type III.6.b, fig. 73.
6. Blinkenberg Type II.1.a, fig. 30.
7. Blinkenberg Type I.1.a, fig. 9.
8. Blinkenberg Type I.10.a, fig. 24.
9. Blinkenberg Type II.17.d, fig. 56.
10. Blinkenberg Type XIII.11.i, fig. 270.

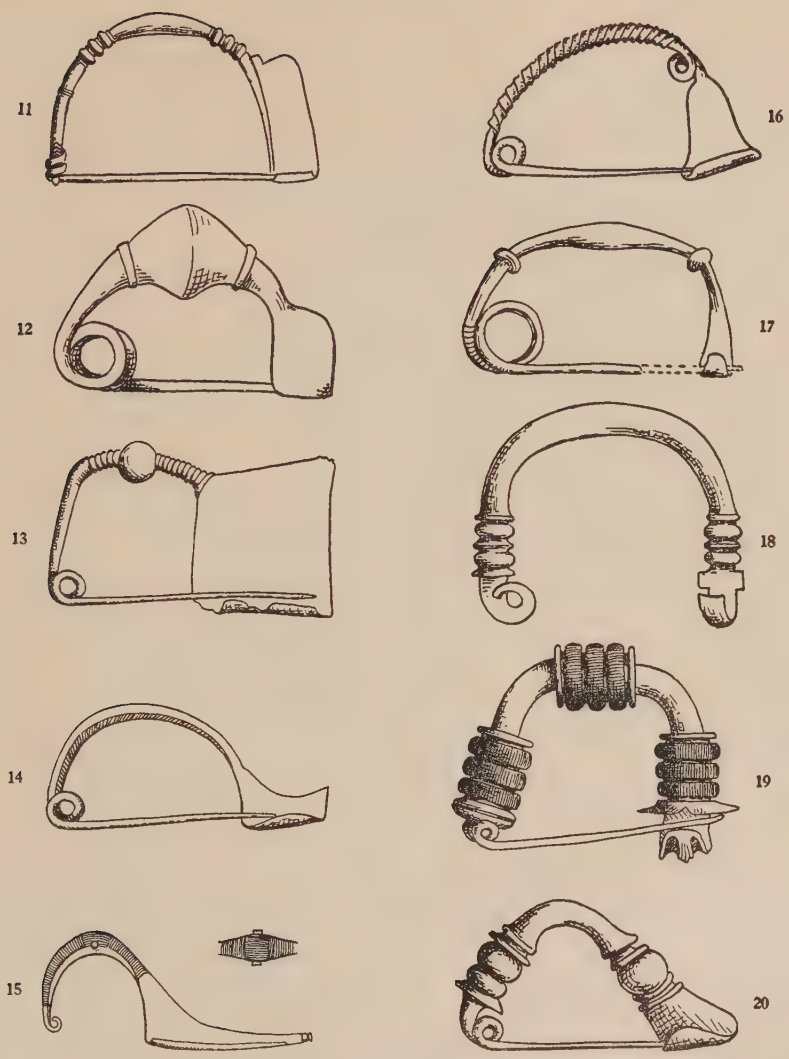

Fig. 14.—Types of Fibulae from Greece, the Ægean, and the Near East.

N. B.—Some drawings have been reversed to facilitate comparison.

11. Blinkenberg Type IV.2.e, fig. 93.
12. Blinkenberg Type II.14.a, fig. 51.
13. Blinkenberg Type VI.6.e, fig. 169.
14. Blinkenberg Type VI.2.a, fig. 126.
15. Blinkenberg Type V.1.b, fig. 118.
16. Blinkenberg Type III.3.a, fig. 68.
17. Blinkenberg Type II.10.a, fig. 43.
18. Blinkenberg Type XII.2.a, fig. 233.
19. Blinkenberg Type XII.13.b, fig. 249.
20. Blinkenberg Type XIII.12.a, fig. 288.

too far, and slip through the garment, unless they are furnished with a head; which is made either by working a knob on the end of the shaft, or by coiling the shaft itself into a hook or knot. The early copper-workers of western Asia and Cyprus used both devices. They also perforated the shaft, halfway down, to receive a thread which could be hitched round the shaft (as a seamstress secures her needles) to prevent the pin from slipping backwards. Here oriental ingenuity ended.[59]

This eyelet-pin reached Egypt rarely, and Babylonia not at all; but it passed through the "second city" of Hissarlik into the mid-Danubian culture, where it had a wide vogue, and thence into Italy with the "terremare" culture, and also into the Baltic area. But it never was adopted in the Ægean. Somewhere in the north the further discovery was made that by passing another pin through the eyelet instead of a thread, and bending its free end round so as to engage the point of the perforated pin, a securer and more durable fastening was achieved. These northern or eyelet-fibulae are, however, quite distinct in structure and origin from those of the Ægean.[60] Nor are they demonstrably earlier. Only one is as yet known from Greek lands, and that is a late and specialized example, with the bow shaped like a horse, standing with its hind feet on the eyelet end of the pin, and holding the catch in its mouth. It was found at Aloni in eastern Crete, and is certainly of foreign make, and not of very early date.[61]

Ægean types of fibula are of quite different construction, and Blinkenberg's recent review of the types found in Greek lands and the Nearer East justifies the following conclusions and further inferences.

First, the fibula formed from a single dress-pin, bent upon itself so that the head-end engages the point and forms a "catch," is an Ægean invention demonstrable only in Crete.

It originated in a peculiar Late Minoan dress-pin in which there is no distinct head, but the upper end of the shaft is bent round parallel with the lower, so as to prevent the pin slipping through the garment pointwards. The rope-like twist of the shaft itself is probably a further device to give the pin better hold. This invention (fig. 14-*1*) dates from soon after 1400 B.C.

The next stage, in which the head-end of the pin is bent again so as to engage the point, and flattened to form a "catch" broad enough to protect it, is represented in Ægina and in Arcadia.[63] These examples are not exactly dated, but the twisted shaft of the Arcadian specimen (fig. 14-*2*) refers it to the primitive phase of development. The fully formed safety-pin, with shaft spirally coiled to form a spring, is common to Crete, Cyprus, Laconia, Argolis, Corinth, Boeotia, Phocis, Ætolia, Elis, and Cephallenia. Some of these examples have the "catch" formed of more or less elaborately coiled wire[64] (fig. 14-*3*).

This "violin-bow" type occurs also in the lake-dwellings of Lake Garda, and sporadically round the head of the Adriatic, and even in Switzerland.[65] As these northern examples include one with the peculiar "pilaster" bow, represented at Mycenae, Tiryns, and Thermon in Ætolia, and perpetuated in the Ægean (fig. 14-*9.11.17*) independent invention is improbable. The only question is, whether the new device spread northward or southward.[66] As the northern finds lie within the long-established province of the "eyelet" pins, they represent a quite new departure there; and as one of the fibulae from Lake Garda has the bow of twisted wire characteristic of the Ægean prototype, but not known among the straight pins of the lake-dwellings, the place of origin seems certainly to be in the south. Moreover the "pilaster" fibula from Lake Garda is plated with gold, a refinement otherwise unrepresented in the lake-dwelling culture, and probably beyond its skill. That the lake-dwellings yield

spiral-headed pins, and lie in a region where such pins had long been in use, does not prove more than that, when the new invention reached the head of the Adriatic, the spiral-headed pins, already in vogue there, were the most convenient objects for conversion into safety-pins; and this view is supported by the fact that it was from this northern region that the so-called "spectacle" fibulae spread, together with a great variety of types (fig. 14-*4.5*) in which the bow is elaborated into complicated designs of spirally coiled wire. These mainly Danubian types must be separately discussed later (p. 423).

Supplementary evidence that the focus of invention was in the South Ægean comes from the geographical distribution of the next improvement (fig. 14-*7.8.9*), namely the lengthening or "stilting" of the catch-end of the bow, so as to hold a greater thickness of folded drapery. This improvement is found in Crete, on the Carian coast, and in Cyprus;[67] but it was only in Crete that the greater elasticity thus acquired by the bow was appreciated and improved by lengthening and recurving the stilted catch into the "elbow" type which spread west, like the primitive "violin-bow" fibula, (fig. 14-*3.7*) to South Italy and Sicily, and up both shores of the Adriatic, though it never attained the same vogue farther north. Still more elasticity was attained by converting this "elbow" into a second spiral spring between the catch and the bow; this too is found in Crete; it spread westward into the "serpentine" types, which have much the same distribution as the "elbow" fibulae; and also northward through Macedonia (fig. 14-*16*).[68] The further experiment of working the whole of the bow (fig. 14-*5*) into sinuous or spiral convolutions has its simplest examples in Crete;[69] and it was this which, reappearing in Cephallenia, and also far up the Adriatic, and in South Germany, in a primitive "violin-bow" type (fig. 14-*4*) and therefore quite early in the whole series

of forms, suggested to northern craftsmen, already familiar with spiral-headed pins, the wonderful designs of the Danubian "spectacle" fibulae.

But whereas in all Ægean fibulae these modifications of the bow are all executed in the same vertical plane as the spiral spring and the catch-end, the only early improvements in the North Italian province are in the transverse plane; striking proof of a complete severance of direct intercourse between the craftsmen of the two regions, and also of the early date of this divergence. And it must be noted that the most original of all Danubian innovations, the brooch of elaborately coiled wire is also structurally in the vertical plane; of Ægean affinity, therefore, not Italian.

The question has therefore to be asked, whether the sinuous bow which appears occasionally in graves of the earliest Iron Age of Koban in the Caucasus region[70] is due to some such Ægean exploration of the Black Sea in the thirteenth century as is indicated by the traditional voyage of the "Argo"; especially as there is an elaborated violin-bow type common to Roumania and southern Hungary,[71] the structure and ornaments of which, though spiraliform, are quite different from those of the "spectacle" fibula, and so close to the Mycenaean prototype with spiral-wire catch in the vertical plane, as to suggest independent transmission up-Danube, rather than downstream from an Adriatic original.

All these earliest types and varieties are dated by excavation evidence to the fourteenth and thirteenth centuries, and are superseded thereafter by other types of more limited regional distribution.[72] Evidently a period when intercourse between the South Ægean and the outer seas was wide, easy, and comparatively frequent, was succeeded by events which broke up this state of things, and restricted men's movements, and still more, their opportunities for exchanging their women-folk in marriage; and this counts for much, where the spread of personal ornaments is in question.

These regional restrictions become more evident still, if the numerous fibulae from a few great sanctuary-sites are discounted. Olympia, Dodona, Delphi, Delos, and the Argive Heraeum were the centers of pilgrimage from all parts of the Greek world. Fibulae were commonly dedicated at all these sanctuaries, no less than at shrines of local repute such as that of Zeus Thaulius at Pherae in Thessaly; and consequently types otherwise peculiar to this or that region are found here commingled. On the other hand, when the fibulae from the great sanctuaries are discarded, Blinkenberg's classification into fourteen different types—a most valuable contribution in itself—may be greatly simplified by reassembling. Certain of his types, of which the more specialized varieties merge in a very puzzling way, are found to overlap in their regional distribution, whereas a few larger groups, formed out of several related types, are comparatively distinct in their geographical range. In what follows, therefore, the evidence from the great sanctuaries is deliberately ignored, or separately stated so that the complications which result from it may be recognized.

Some of the types of fibula which outlasted the primitive "violin bow" in the Ægean, began there, like the "violin bow" itself, before the close of the thirteenth century. Simplest and also most widespread of these secondary forms are those with semicircular bow (fig. 14-*6*) capable (like the stilted type) of holding a larger fold of cloth.[73] Often the bow is of twisted wire, as in the prototypes. These are recorded from Crete, Thera, Ægina, Salamis, Thessaly, Macedonia, and the "sixth city" at Hissarlik, in Late Minoan associations, as well as at Thebes, in Caria, Cyprus, and Palestine, less precisely dated. These fibulae were certainly therefore in use about the time of the Sea-raids,—which sufficiently accounts for their wide distribution eastward. They are also widespread in Italy.

A further chronological point results from the distribution of the type in which the bow remains nearly straight but is "stilted" above the catch only.[74] This unsymmetrical type, common to Ætolia, Athens and Salamis, Lesbos, Crete, Rhodes, Caria, and Cyprus, is dated not only by its Late Minoan associations in the Attic Salamis, but by the fact that in Cyprus it is the latest Ægean type which arrived unmodified, whereas it is the prototype there of some characteristic derivatives[75] (fig. 14-*9.10*). It therefore arrived before Cyprus was cut off from the Ægean, and this, as we have seen (p. 152), occurred before the spread of Doric speech oversea, and in immediate sequel to the Land-raids into Cilicia and Syria, which profoundly changed its culture. Its arrival in Cyprus, therefore, is dated in the twelfth century, and its vogue in the Ægean to the same period or rather earlier,[76] though like other early types, once established, it remained in occasional use for long.

Omitting therefore, for the moment, all discussion of later developments, we reach the conclusion that fibulae were in occasional, though not necessarily general use, from a fairly early phase in the period of transition from Minoan to Hellenic; and that the rarity of types so primitive, outside the Ægean, is a strong argument in support of an Ægean origin for them. It follows further from these limits of date that if there are no very precise descriptions of fibulae in the Homeric poems, it was not because there were no fibulae in common use. And though nothing has been found to rival the splendid gold *peronê* of Odysseus, shaped like a hound seizing a fawn, fibulae are found rarely, at all but the very earliest periods, with animal-shaped bow, in bronze, or in ivory or amber threaded on a mere bronze wire.[77] In Attica this fashion survived in the "cicada" brooches worn in classical times.[78]

It is with the next direct step in development that we are recalled to the fibulae from the cremation tombs at Halos,

with which this enquiry began. Their types are neither very early, nor unusual, except in the decoration of some of the bows.[79] All through Central Greece, from Thessaly to the Arcadia and the Cyclades, the "stilted" form already described was improved by hammering out the catch-end into a flat plate, the lower margin of which was bent up into a long trough, wherein the pin rested (fig. 14-*11.16*). This had the great convenience that if the bow was accidentally strained, the pin point neither missed the catch, nor projected beyond it. The shape of this "catch-plate" varied greatly.[80] In the islands (fig. 14-*11*) it is long and narrow, sometimes a mere forward wing, to the inner edge of which the stilt still gives rigidity. In Attica and Boeotia, the stilt disappears, and the catch-plate becomes square and very large (fig. 14-*12.13*) with elaborately engraved designs on each of its surfaces. In Thessaly (fig. 14-*14*) it becomes wider and comparatively short from bow to catch, the upper edge is concave, and the free top-corner is prolonged into a spike and sometimes protected by a knob. In Epirus this free corner disappears, the catch-plate shrinking to a low wedge shape, hardly higher than the catch; and it is this type (fig. 14-*15*) which passes over into Italy in the period of Greek colonization.[81] All these varieties, however, are of wide distribution; the Thessalian type wanders into Peloponnese and the islands as far as Rhodes; the insular type to Peloponnese, and more rarely to Thessaly and Boeotia; "Epirote" fibulae are recorded from Phocis and Thessaly; even the peculiar Attic and Boeotian varieties are recorded from Crete, and (what is more to our present purpose) at Halos. Collectively they form a single group which may be described generally as "Central Greek," but more appropriately perhaps as "mid-Ægean," in view of its frequency in the island-world.

Now if the geographical distributions of this large group of "catch-plate" types be plotted and then superposed

as in figure 15 their combined area coincides very closely with that of Agamemnon's confederacy as described in the Homeric *Catalogue*. None are recorded from Cyprus; hardly any northeast of a line drawn from the Thessalian coast to Rhodes, except at the Ephesian sanctuary and

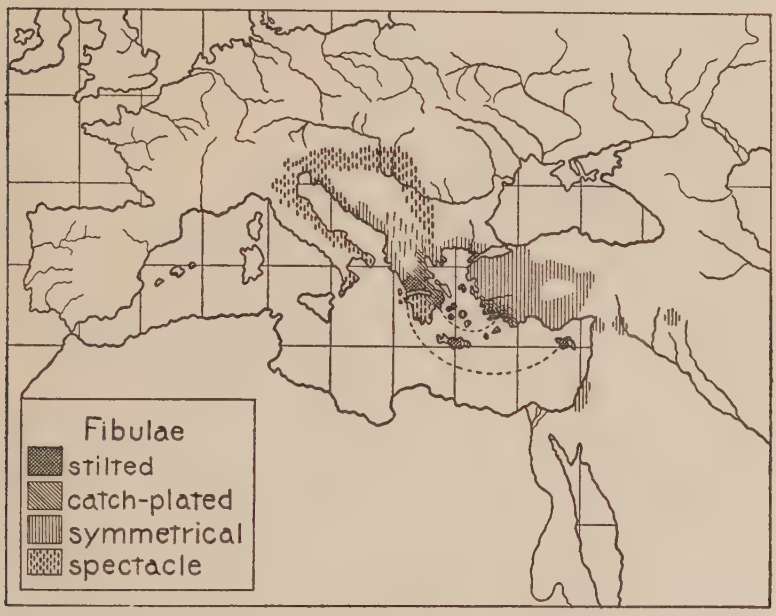

Fig. 15.—Geographical Distribution of the Principal Types of Fibulae in Greece, the Ægean, and the Near East.

two stray Thessalians from Macedonia;[82] only the "Epirote" variety has any counterpart west of the Adriatic or along it, and for this there is proof of late spread through colonial settlements from the Corinthian gulf. To give an approximate date at which these types were first propagated, we have the cremation tombs at Halos, and another cemetery at Vrokastro in eastern Crete; both belong to a very early period of the Iron Age.

The frequent interpenetration of relatively local varieties of design throughout this large area, within the single dominant design of the "catch-plate" construction, can only be explained if we suppose that, during the period of "catch-plate" experiment, the whole of this area formed a single coherent cultural region; and that then this solidarity was shattered, though not destroyed, so that Thessaly, Attica with Boeotia, and the island-world, worked out their own improvements separately, while exchanging examples of their respective products. This sequence of events corresponds closely with Greek folk-memory, first, of the so-called "Achaean" régime, under the "divine-born" dynasties, from about 1260 to about 1120; and then, of the redistribution of political spheres of influence, Thessaly and Central Greece as far south as the frontier of Attica falling under the dominion of "those who came from Arne" sixty years after the Trojan War, while Attica and also the island-world remained free of that incubus; though the southern fringe of the island-world was eventually recolonized by mixed bodies of emigrants from Argolis and Laconia, after the Dorian conquest of those districts, with the archaeological symptoms of which we are not yet concerned. That Boeotia retained in its fibulae so close an association with Attica is explained by the partial character of the conquest of Boeotia, where a large part of the old population remained undisturbed, though put out of action politically. That Argolis and even Laconia retained a large measure of pre-Dorian culture, outside the political sphere, is also in accord with the traditions, and explains the persistence of "catch-plate" fibulae down to the eighth century, when the derivative "Epirote" type with long pointed catch was carried across the Adriatic by traders and colonists, mainly from the shores of the Corinthian gulf.[83]

A further consequence follows, of the first importance as a counterpart to the perplexing history of Greek speech

within this region. After the migrations and conquests, Æolic dialects were dominant as far south as the frontier between Boeotia and Attica; Ionic south of this frontier, into the island-world and also into North Peloponnese, except where it had been superseded by Arcadian in the thirteenth century, and by Doric in the eleventh and tenth. But in the period of "catch-plate" expansion, which as we have seen, was also that of the "Achaean" feudalism, intercourse was evidently easy and habitual, between Thessaly on the north and Crete and Rhodes to the south. Whatever the precise distribution of Æolic and proto-Ionic dialects on the Greek mainland, it was inevitable that, with such facility of intercourse, there was some means of conversation, as generally accepted as was the "catch-plate" fashion in personal ornament. Once again we have to look, not only to the traders and free-lances, but to the women, married by contract or capture into homes with a dialect not their own. Now this is precisely the state of things which is reflected in the Homeric dialect, with its generally Ionic character, but also its numerous Æolisms; to which must now be added an appreciable Arcadian element. That such concordance between material art and dialect over a period of several centuries is not fortuitous, is indicated by the striking correspondence between the geographical distribution of modern Greek dialects and the styles of embroidery, in the same region two thousand years later. As long as the seas are comparatively safe, standard speech and standard styles of decoration prevail; during periods of naval anarchy each district develops differently, and the boundaries of the women's arts in particular are also those of the principal dialects (pp. 159, 365).

Whereas the "stilted" and "catch-plate" fibulae all differ from the primitive "violin bow" in their unsymmetrical design, there was alternative and contemporary develop-

ment which enlarged the embrace, while conserving the symmetry, of the bow, by making it semicircular,[84] (fig. 14-*6*) and then elaborating both ends alike, rarely and experimentally into a pair of "stilts" (fig. 14-*17*; whereas the "stilted" fibulae already mentioned have only one), but eventually into substantial terminals (fig. 14-*18.19*) which attracted the decorative ingenuity which in unsymmetrical fibulae is devoted to the exaggerated catch-plate.[85]

It was an obvious enhancement of the same symmetry, to provide the catch as well as the pin with a spiral spring (fig. 14-*16*); but though this appears in Macedonia in three late examples, it disappeared early from the Ægean, and had its only popularity in Bosnia and Croatia,[86] occurring also so far afield as Poland, and supplying an additional overland link with the more elaborate spiral-wire designs characteristic of the Middle Danube. The geographical distribution of this "twin-spring" variety shows that the "symmetrical" model had reached the North Ægean before this experiment became obsolete. A date for the introduction of the fibulae into districts north of the Ægean is given approximately and indirectly by the fairly frequent occurrence of late varieties of Mycenaean pottery in the upper Bronze-Age layers of Macedonian settlements, whereas these imports totally disappear after the catastrophe with which the Macedonian Iron Age begins.[87] As a "violin-bow" fibula has been found in one of these sites at Vardino, some distance below the top of the Bronze-Age layer, it is more probable that a modification, so much nearer to this prototype than are the "catch-plate" fibulae of Thessalian pattern, which are occasionally found in Macedonian Iron-Age deposits, was introduced during this period of Mycenaean intercourse, and developed locally after it ceased, than that it was independently invented later, when it had gone out of use in the Ægean. There is therefore some reason to suppose that the

symmetrical fibulae with massive terminals are derived from the same early design as the "twin-spring" fibulae of the northwest. Conjectural this derivation must remain, till intermediate varieties are found; but it will at all events be recognized, from its geographical distribution, that the "twin-terminal" fibula begins to appear approximately where the "twin-spring" fibula ceases, and that the distributions of the two types, taken together, form a single large continuous region addicted to "symmetrical" fibulae.

Immature or demonstrably early examples of this "twin-terminal" type are very rare. What is significant is the wide range and persistent symmetry of the type, once established. In details it receives rich enhancement. The terminals usually have deep mouldings or collars (fig. 14-*18.19*); but these are replaced by plain cubes, animal heads, flower buds, and eventually by palmettes, obviously oriental.[88] The bow, though occasionally of the primitive twisted wire,[89] is more often solid and heavy, or carries a few collars or beads, arranged to emphasize its symmetry (fig. 14-*19*) and sometimes dividing it into balanced halves.[90] Or the solid, bead-laden bow is replaced by a semicircular plate decorated with knobs or rivets on one surface only, so that the bow has a front and a back.[91] Rarely, a flat bar connects the terminals and carries the spring, pin, and catch on its reverse, like a modern brooch.[92]

This "Asiatic" twin-terminal type becomes common all through northwestern Asia Minor, from Hissarlik to Angora, and in Cappadocia, where it is represented on the later relief-sculptures: it reappears in North Syria, as far east as Carchemish, and even at Nineveh and Babylon; in Palestine at Gerar, Gezer, and Beth Shemesh;[93] in Egypt, at the foreign settlement of Tell-el-Yehudiyeh; and (with local varieties) in Cyprus. Clearly, though subject to much modification in detail, and at several successive periods, this type represents a single uniform introduction of the practice

of wearing fibulae. As the prototype is a very simple, even primitive one, it was clearly acquired, by those who introduced it over this wide area, at a very early stage in the development of fibula types. Once established in Asia Minor, it underwent little further change, except the flat brooch with cross-bar, the triangular Syrian variant (fig. 14-*20*), and the frequent abandonment of the spring in favor of a pivot or a rivet. It cannot be derived from any Cypriote or Levantine prototype, for it intruded into Cyprus late, and met there the "stilted" fibula already established. On the other hand its symmetry connects it fundamentally with the "twin-spring" series in Macedon and the northwest, and this series as we have seen, has an early Ægean origin.

Within the Ægean, this "Asiatic" fibula is characteristic of the early temple-deposit at Ephesus; it occurs in the islands, at Samos, Lindus, Thera, Paros, and Eretria, and in Boeotia at Thebes and Chaeronea, evidently traded from the island-world through Euboea. Farther afield still, it visits, as we should expect, the three great sanctuaries, and appears on the pilgrim road to Olympia at Lousoi and Tegea. It is recorded from Locris, Thessaly, and Dodona, and gives rise to an interesting local school in Bosnia, along the line of the "Hyperborean Road" between Delos and the head of the Adriatic. As, however, it has no counterpart farther north, it is clear that it was propagated from the south; and this negatives the not unreasonable doubt whether the Macedonian prototype might itself be of northern origin. These westerly dispersals are indeed sufficiently explained by the popularity of the mature "Asiatic" type in early Ephesus, and presumably among its Ionian trading-neighbors.

Now there was only one occasion when people of the same culture simultaneously reached, and thereafter continued to influence, the whole of the wide area between Troy, Carchemish, and Palestine; and that was in the days of the Land-raids. We have clearly here an archaeological

concomitant of that movement; and this conclusion serves further to support those already reached, as to the occasion when the "stilted" type reached Cyprus from the South Ægean, and also as to the date of development of the "catch-plate" fibula in the mid-Ægean area. For we have only to plot on the map (p. 415) the approximate areas of distribution of these divergent types, to realize how closely they fit the distribution of dialects and political régimes: the "catch-plate" fibula with the Æolic and Ionic dialects; the "stilted" type with the island-world of the Achaean *Catalogue* together with the "sea-raided" district round Cyprus, which we have already seen occasion to correlate with the "Arcadian" group of dialects; the "Asiatic" type with the Ægean façade of Priam's confederacy together with the regions overrun by the Land-raiders. That the propagators of the "Asiatic" type were not themselves intimately familiar with the fibula is clear from their gradual abandonment of its most characteristic feature, the spiral spring. It was therefore only after this eastward movement had ceased, that the "twin-spring" fibula which is so closely related with the prototype of the "Asiatic" form, became popularized in the northwestern interior behind Macedon;[94] and far later still that the fully formed "Asiatic" fibula itself was retransmitted westward across the Ægean, as has been described.

In what precedes, it is not suggested that all extant fibulae of these respective types are even approximately contemporary with the events which established the distribution of the types themselves. Some of them, indeed, especially in Asia Minor, are obviously much later.[95] But this fact only emphasizes the conclusion that the initial spread of the practice of fibula-wearing was a summary dispersal, and that, when this was once accomplished, there was little cultural intercourse between the regions thus

delimited, except along a few well-defined routes of pilgrimage or demonstrable trade, such as brought "Asiatic" fibulae to Dodona and acclimatized them in Bosnia.

Only on one site is it possible as yet to test the conclusion to which this regional analysis of the fibulae has led us. By far the largest number of fibulae from any Asiatic site, except the sanctuary at Ephesus, come from funerary mounds at Gordium, on the bank of the Sangarius river in Phrygia.[96] Here a stratified mound, inhabited since the Stone Age, was converted in the Early Iron Age into the fortified palace of a Phrygian chieftain, which remained in use till classical times. In its neighborhood lie more than twenty tumuli, five of which have been explored. The latest (V) contained the remains of a cremation, dated by Greek painted vases to the end of the sixth century. Tumulus I, with cremation and Corinthian vases, was obviously rather earlier. Tumulus II, earlier still, with a Milesian vase and an oriental scent-bottle of carved alabaster, of the seventh century, covered not a cremation, but a chamber, lined with durable wood, containing a coffin of wood inlaid with ivory of early Greek workmanship.[97] Tumulus III and tumulus IV had similar chambers and coffins; in IV were a few bronze vessels, in III much richer furniture in wood, bronze, iron, and pottery, including vessels with peculiar trough-spouts, and geometrical ornament of painted latticework and concentric circles, enhanced in one example by a figure of a bird in the same style as on pottery from the neighboring palace and from several other sites on the plateau of Asia Minor. All five tumuli contained fibulae, uniformly of "Asiatic" type, and differing very little in detail, though Tumulus III was certainly some centuries older even than Tumulus II; and similar fibulae were found in the settlement. Here, therefore, mound-burial and "Asiatic" fibulae are associated throughout a long series; and though cremation only appears—or reappears—later,[98] and there is no

evidence as to weapons, the trough-spouted pottery and the combination of geometric and concentric circle ornament make up a group of characteristics closely parallel to those of the tombs at Halos.

If then these fibula-wearing regions represent the results of the great disturbances and adventures of the thirteenth century, it is reasonable to ask whether the only subsequent movement of aggressive tribes in Greek lands, namely the "coming of the Dorians" and their West-Greek-speaking kindred, has its analogous symptom in the distribution of some other type of fibula in Greek lands. The answer to this question is unmistakable.

The Spectacle-Fibula and the Coming of the Dorians

In the stratified deposit of votive débris in the sanctuary of Artemis Orthia at Sparta, we have indisputable record of the material culture of a Dorian people from the time of their occupation of that site.[99] Here, the most numerous and characteristic fibulae are not of any of the above-mentioned types, but are either "spectacle" fibulae or functionless substitutes for these, carved in bone or ivory, and fastened to the bow of a mere safety pin of primitive South-Ægean form. Now the "spectacle" fibula is not an Ægean form at all. It originated like all Ægean forms from the primitively coiled wire; but whereas in the Mycenaean prototype of all Ægean fibulae the bow became rigid almost at once, and elasticity was given only by the spiral at the base of the pin, in this alternative type the whole length of the bow was kept thin and was coiled or bent upon itself, in forms at once useful and highly decorative. The simplest experiments in this direction are found in Crete,[100] but a more elaborate one appears as far south as Cephallenia[101] (fig. 14-*4.5*), while it is widely spread up the Adriatic, and in the countries beyond its head. In the Adriatic the

commonest forms have either a hairpin bend, or a single coil above the catch, and this type also is of Cretan origin;[102] but in Tyrol, Carinthia, and the Middle Danube basin generally, the bow takes the form, first, of a large S-shaped spiral in the same vertical plane as the catch and the pin, giving the outline of a pair of spectacles filled with finely coiled wire; then of various fourfold spirals, and many other schemes even more riotously complicated. It is this highly specialized and peculiarly Danubian type which reappears at the Spartan sanctuary of Artemis Orthia, rarely in the twin-coiled "spectacle" form,[103] but commonly in blundered imitations and miniatures of the fourfold type, in sixfold varieties still more degenerate, and finally in solid brooch-plates of bone and ivory, carved to imitate spirals in the first instance, but deviating into 8-shaped plaques and other fanciful shapes, till almost all resemblance to the spiral prototype is lost.

These spiral fibulae and their derivatives are not confined to Sparta. They occur, of course, at the great sanctuaries of Heraeum, Olympia, and Delphi; at Tegea on the Laconian border, at Lousoi in Arcadia, at Ægium on the Corinthian gulf, in Megaris and Attica,—all districts either colonized by Dorians or overrun by them during the conquest period. All these examples resemble their Danubian prototype so closely that no further proof of connection is necessary. But their geographical distribution is independently conclusive; for they are recorded also from Thebes, Tanagra, Chaeronea, and Elatea, from Locris, Thessaly, and Macedon, always in the simplest "spectacle" variety; not east of Macedon, however, nor in any of the islands except Crete, Thera (a Spartan colony), and Rhodes; and these have derivative types only, and very rarely. That they should be occasionally found on the Italian side of the

Adriatic is only to be expected, considering the frequency of other Danubian types on that coast; but there is only one specimen from as far south as Sybaris, and none from Sicily.

The counterfeit type, in bone,[104] occurs rather more widely, in Thessaly and at Eleusis, on the mainland; at Delos, Paros, Lindus, and copiously at Ephesus; in the west at Syracuse, Gela, and Locris, but not till 700–650 B.C.; and widely in Bosnia, Croatia, and the Danube valley, more probably as the result of eventual Greek trade than through independent imitation of spiral originals, if we may judge from the similarity of these and Ægean examples.

Here again, it is not suggested that even the wire-worked "spectacle" fibulae are all contemporary with the "coming of the Dorians" in the twelfth or eleventh centuries; indeed at the Orthia sanctuary they are characteristic of the middle layers rather than of the lowest. But it is not easy to account for the Spartan preference for this Danubian type otherwise than as part of their initial equipment when they came south; and this conclusion is supported by relative frequency of the "spectacle" type in Boeotia and Phocis—more than half of the recorded examples.

Returning, now, to the cremation graves at Halos, we have to note that in respect to their fibulae, as in their funerary ritual, they are totally dissociated from the culture of Dorian Sparta. Either they belong to an indigenous Ægean culture earlier than the "coming of the Dorians"; or, if they are of later date than that event, they are a survival of pre-Dorian customs into early Hellenic times, in a district, moreover, the dialect of which in classical times was not Æolic, but West-Greek, as is the rest of the region which separates Æolic Thessaly from Æolic Boeotia.

The Leaf-shaped Sword in Greek Lands

Two quite distinct questions are raised by the numerous swords which the graves at Halos contained, in respect of their form and material. In form they belong to a large and widespread class for which the name "leaf-shaped" is customary, and of which the origin is certainly not Ægean. In material, as they are of iron, they confront us with a quite separate problem, the source of Ægean knowledge of this new metal, and the date and mode of its introduction. It is necessary at the outset to insist, in view of current assumptions, that these two questions are distinct; that the leaf-shaped sword was an invention of the Danubian Bronze Age; and that it is only by confusing the earliest with some of the latest stages of its development and spread, that its history has become involved with that of the propagation of iron-working.

It is beyond the scope of this argument to trace to its sources, which are numerous, the great Bronze-Age culture of the Hungarian plain. It is sufficient to note that intelligent and comprehensive exploitation of local resources, the copper and gold of Transylvania, and the tin of Bohemia, followed the introduction of the simple repertory of the copper workers of Cyprus, through Asia Minor, the Marmara region, and the valley routes of Thrace and Macedonia; and that this only occurred after the long eastward propagation of the "bell-beaker" culture, through the Upper Danubian region, and probably also across northern Italy, from its distant birthplace in Spain; though it is not yet possible to assign to either source its due share of creative inspiration.[105] Similarly, it is still doubtful whether its copious employment of amber from the Baltic coast is to be ascribed to the "bell-beaker" exploitation, or to the ruder impact of

those other intruders who brought in the perforated axe and adze, and their double-bladed derivatives. These had been spreading widely and rapidly westward, from the margins of the Eurasian grassland, during a period which can be dated approximately by the occurrence of kindred (and, rarely, of identical) types in the Thracian region, in the "second city" at Hissarlik, and also less coherently in the Ægean. These powerful instruments alike of woodcraft and of war, so closely related in form to the double axe of the sky-gods and thunder-gods of western Asia Minor and of Minoan Crete, were brought to perfection in Transylvania and eastern Hungary, with the help of local abundance of copper. That the unsymmetrical "axe-adze" or "hammer-axe" was not a loan from the bilateral "axe-axe" of the Minoan world seems clear from the distribution of its earlier forms, and especially from its early appearance north of the Caucasus, between the Caspian and the Sea of Azov; and from its association, in all the country between this region and the Danube, with a distinct single-bladed axe, which long remained characteristic of the more easterly districts, though it was used for a while as far west as Bosnia and Croatia.[106] It is probably to the possession of this superior weapon, that the Hungarian Bronze Age owes its long coherence, its wide expansion, and its unexhausted genius for contriving offensive weapons, of which we shall encounter shortly other epoch-making instances.

It was certainly for the masters of this Hungarian region that the first earth-walled hill-forts were constructed, the precursors of the monstrous earthworks with which later conquerors literally "dug themselves in," all over western Europe—at Bibracte and Alesia, at Cissbury, Uffington, and the Herefordshire Beacon. In peaceful arts there was the same exuberant inventiveness, and widespread acceptance of original fabrics and forms.

Only a few examples may be noted here, selected on account of their eventual significance for the Ægean world. This new composite culture was adolescent already when the "second city at Hissarlik" was destroyed, about 2000 B.C., but its maturity belongs to the same centuries of rapidly improving climate, as the "palace" cultures of the Ægean, and the Hittite domination in Asia Minor. But there was little direct intercourse. The earlier relations cease between Danubian and Spanish metal work. At most there are amber beads in two of the shaft-graves at Mycenae, at Kakovatos and Asine, and occasionally later, to set on one side of the account; Cypriote eyelet pins and an occasional one of Syrian pattern on the other.[107]

The fabrics of pottery, of which what is called "Pannonian ware" is the culmination, display bold design, skilful execution, uniform gray-brown coloring, and elaborately incised decoration, including curvilinear designs, and occasional representations of men, animals, and wheeled vehicles, in which the graver is supplemented by ornamental punches, and toothed wheels such as pastry-cooks use; all probably borrowed from the tool bag of the bronze-worker. A common punched ornament consists of concentric circles, like the rings of a target. This elaborate and facile decoration of the pottery is only the special application, to a durable material, of an artistic repertory the wealth of which we estimate imperfectly from the representations of textiles on fully clothed statuettes like that from Klicevač, from the complicated spiral decoration on bronze shields and sword hilts, and from the occasional imitation of basketry, woodwork, and other perishable materials by the makers of pots and bronze-work alike.

The receptiveness, and also the ingenuity, of the Danubian bronze-workers have been already illustrated in regard to the safety-pin. The "two-piece" fibula was a Danubian improvement on the single eyelet-pin transmitted from

Cyprus through Hissarlik. The "spectacle" fibula was the Danubian elaboration of the "spiral-catch" fibula borrowed from the South Ægean through Adriatic trade, and refunded to its inventors after the coming of the Dorians. And the same inventiveness created an instrument of war hardly less potent, in determined hands, than the perforated axe to which Danubian culture owed its widespread and long enjoyment of a secure domain. This was the "leaf-shaped" sword, equally fitted for thrusting, like the older daggers and rapiers, and for slashing with the heavy downstroke familiar to the masters of the battle-axe.

From the primitive two-edged dagger or knife, as we have it in Cyprus, at Hissarlik, and in the early tombs of the Cyclades and Crete, Ægean culture developed only the Cycladic and Minoan rapier, whose flimsy attachment to its handle by rivets, or perhaps a short flat tang, prevented its keen edges from serving as more than a supplement to its point; at most they facilitated dexterous ripping open of the wound. For such rapier play, the blade was counterpoised by a substantial pommel, so that the center of gravity lay almost within the hand. Danubian warriors, on the contrary, familiar as they were with the cleaving stroke of the battle-axe, conceived and elaborated from the same primitive blade a very different weapon, the slashing-sword.[108]

In this weapon the center of gravity was thrown far down the blade by expanding the midrib, and the leaf-shaped profile thus given to the cutting edges rendered the weapon equally formidable for thrusting and for slashing. At the same time the tang was prolonged to the full extent of the grip, and made rigid as a girder by deep marginal flanges against lateral stress. Rudimentary flanges, to steady the grip-plates, had indeed been employed in Egypt and Syria as early as the Eighteenth Dynasty, and perhaps earlier, and in Minoan rapiers as early as the shaft-graves; but it was Danubian ingenuity that gave to the flanged hilt a

new structural value. Between these deep flanges grip-plates of wood or bone were securely imbedded and held fast by rivets; the pommel disappeared or became merely decorative, and in its place the flanges diverged only so much as to prevent the sword from slipping through the hand. Ægean swordsmen never wholly discarded the traditional pommel, but bisected it, and fitted each half within a T-shaped extension of the flanged tang; and this southern variety remained in use, as rare examples and numerous Greek representations of it show, till the eighth and seventh centuries, when it passed into South Italy and Sicily with the first Greek colonies, and had a wide vogue there.

The spread of the leaf-shaped sword, and its development, were alike gradual, and consequently illustrate each other. For the raids achieved with earlier varieties were mainly in the direction of Italy, and it is only in their middle stages of development that these swords are found in Greece, Cyprus, and Egypt. Here by a fortunate accident we have an absolute date, for one of these swords found in Egypt bears the name of Seti II, who reigned only from 1214 to 1210.[109] As this blade is about midway in the series, it is safe to infer that the leaf-shaped type began to emerge about 1400, and had developed into the specialized "Hallstatt" sword by about 900. The derivative sword with a pair of spiral "antennae" instead of a pommel follows about a century later still. In Hungary itself the series ends abruptly and prematurely, at a distinct stage of development which was current about 1100: the significance of this break in the series will be evident later (p. 453).

There was thus a long period during which the leaf-shaped sword was in competition with other types. In the sculptured record of Rameses III, nearly a generation later than the sword marked for Seti II, Sea-raiders still use straight-edged thrusting-swords, some with heavy pommel like the shaft-grave rapiers, some with a peculiar hilt,

double concave in profile I.[110] But on an ivory relief from a Minoan tomb in Cyprus, of the thirteenth century, a warrior holds an unmistakable leaf-shaped sword, of the short broad variety which persisted in Cyprus into the Early Iron Age.[111]

The same concurrence of sword types is well illustrated by the difficulty of interpreting either the forms or the uses of swords in the Homeric poems. Some have an "extended edge"; but is this the straight razor-edge of the rapier, or the "leaf-shaped" convexity? Some have conspicuous "silver nails," clearly the rivet heads in the handle plates; but conspicuous rivets are common to the shaft-grave weapon and to the leaf-shaped, though the sole extant sword with *silver* rivets is of the latter type. The Homeric scabbard of "turned ivory" belongs to the daggers of the Ægean, whereas the Danubian scabbards are of leather, bound and shod with bronze. Similarly the Homeric vocabulary includes specific words for thrusting and for cutting; but other terms are used to describe both kinds of stroke. Of the wounds, some are such as would result from the ripping thrust characteristic of the broad shaft-grave rapier, but others are slashes; and the blade "shattered in three and four" on an enemy's headpiece was a cutlass rather than a rapier.

The sword given to Odysseus in Phaeacia, and expressly described as "wholly of bronze" recalls Danubian types in which blade and hilt are cast solid. It had however silver hilt and rivets, presumably plated. That this sword should be mentioned as a special gift, in a far western context, and among people with wide sea-faring connections, is noteworthy evidence both of the extent and the variety of the observations which the poems enshrine.

Finally, swords are twice described as "Thracian"; one of these is also "great," the other has the "silver nails" already mentioned. As one belonged to a Trojan, the other

to one of Troy's Paeonian allies, it may be suspected that this type was not in common use among Achaeans. Very large swords seem to have remained in vogue in Thrace[112] in classical times, but no examples of these have been recovered. The Homeric allusions are therefore only of value as evidence of the coexistence of varieties. Other rare or wonderful swords were the sword of Peleus, which was "divinely made," and that of Theseus, an heirloom and distinctive.[113]

With the leaf-shaped swords at Halos is also a great one-edged knife with slightly convex blade.[114] Similar knives from Early Iron-Age graves at Chauchitza in Macedonia, though later in date, connect it with the Thracian cutlass, characteristic of Thracian fighting men in the fifth century, and frequently figured then in Greek vase-paintings. Though distinct in form and name from the concave-edged or flamboyant "sickle-sword," which was also regarded by Greek writers as Thracian, and has been found, in iron, in Bulgaria, it belongs to the same general group of types, and this has wide distribution; "sickles" for example were used by Carian troops in the fifth century. In bronze and also in iron they are ubiquitous in the Danubian culture from the latter part of the Bronze Age onward.

But similar types occur in bronze in the Caucasus region, and in copper from mound burials near Merv, as well as in Egypt, in Syria, and the Minoan repertory.[115] It is not safe, therefore, to accept Thracian weapons of this—or indeed of any type—as Danubian, without raising the previous question, whether Danubian metal-workers acquired them from Asia Minor through Thrace.

Returning now once again to Halos, we have to note that all the swords there are of a rather early stage in the "leaf-shaped" series, with hilt flanges convex where they enclose the heel of the blade. In Hungary this type of hilt

could hardly be later than 1300, yet at Halos the fibulae are of a "catch-plate" type which can hardly have originated earlier than 1100, and certainly survived much later. Clearly there is here an anomaly to be cleared up by other evidence. The cross-section of the blades, too, is not convex but lozenge-shaped, with slightly concave surfaces; and though there are both straight-edged and leaf-shaped blades at Halos, even the broadest of them are less expanded than is usual among the maturer types in the north. And this is characteristic of early iron swords in the Ægean, the straight-edged type being found at Dodona in the far northwest, in Boeotia, Attica, and Argolis; in Crete, on the Carian coast, and in Cyprus; the broader type only at Halos and in Attica, Crete, and Cyprus hitherto.[116]

We are therefore confronted with yet another problem, the date and origin of the earliest iron and of an "Early Iron Age" in the Ægean. This problem is in itself difficult; it has been complicated by successive attempts at a solution; and the evidence is still defective. But no survey of the origins of the Greek people may avoid it, if only because the Homeric references to iron have hitherto been so hard to understand.

The Introduction of Iron into Greek Lands

The origin and early distribution of iron-working has been so fully discussed elsewhere, that it is unnecessary to do more than repeat the chief conclusions which may be regarded as established, and examine the swords from Halos in the light of them.[117] Much confusion might have been saved if it had been more clearly recognized that, as meteoric iron may fall from time to time on any part of our planet, occasional discovery and use of this "metal of heaven" (as the Egyptians believed it to be) cannot be excluded at any period and in any region.[118] The Homeric phrase "iron

firmament" is sufficient to show that this Egyptian belief was held in early Greece, and consequently not much is to be learned from occasional objects of iron, decorative or prophylactic, from Minoan sites. Another phrase, that "iron of itself draws a man on" may perhaps refer to its magnetic quality, as well as to the lure of a weapon; but "iron hardness" of heart, frame, or temper, or an "iron look" in an eye, as well as the epithet "flame-colored," are no less appropriate to its ores than to the metal itself; and haematite had been commonly used by Minoan seal engravers.[119] But "gray" iron must have been metallic,[120] an "iron crash" likewise; a simile derived from the process of tempering cannot refer to any other metal; the epithet "much-belabored" graphically describes the final stage of the primitive "open-hearth" process, when the slag has to be kneaded out of the spongy mass by long hammering; and the cargo of "flame-colored" iron in the Taphian ship which touched at Ithaca proves transport either of metal or of ore from western Greece[121] to some foundry oversea. This epithet is however also applied to axes, which are more carelessly kept than swords.

Iron however cannot have been common, when epic poets ranked it with gold and silver in royal treasuries, or even when a "self-cast" ingot of it, itself a valued piece of loot, was offered as a prize for "putting the weight," or "axes" and "half-axes" were awarded according to their respective values.[122] That iron should have been more acceptable, as these passages (and others relating to iron tools) suggest, to the farmer than to the warrior, is easily understood, when so much depended on quality and workmanship; bronze cannon similarly gave place to cast iron very slowly, as cast iron did to forged steel. Even an iron mace was an individual's freak. Among cutting implements, too, iron knives, axes, and arrows are mentioned in the poems, though the iron sword is not. The remaining uses for iron in Homer,

for fetters, for the gates of the lower world, and for Hera's chariot axles, do not add much, except to strengthen the contrast between industrial and militant uses.[123]

It was once fashionable to argue that these Homeric passages, or the poems at large, were "late," in the belief that there was a clear cut between a Minoan "Age of Bronze" and a Hellenic "Age of Iron." But the transition is now known to have been gradual, and to have been more rapid in some districts than in others.

To Egypt the "metal of heaven" was being brought as tribute from Syria during the Nineteenth Dynasty; Tutankhamen (*c.* 1360) had an iron dagger, as a most precious thing. Soldiers of Rameses III are sometimes represented with weapons painted blue instead of the usual copper red. At Lachish in Philistia iron weapons and tools become common rather suddenly about the same time. At Gerar, in the same district, iron appears rarely about 1350, and was being smelted and also tempered there about 1200, as the remains of furnaces show.[124] In Jewish tradition, iron was in use in Palestine in Joshua's time. To the twelfth century belongs Jabin king of Hazor with his "four hundred chariots of iron," and Goliath of Gath, with his iron spearhead, to the end of the eleventh.[125] At Gerar, knives, daggers, spears, and arrowheads were made, as well as various tools; but no swords have been found in Egypt or Palestine, of so early date.

At Carchemish, iron weapons appear suddenly in the "reoccupation layer" after the Muski conquest about 1150, and again in neighboring tombs of a rather later period, together with fibulae of "Asiatic" type (p. 419);[126] and as "Asiatic" fibulae were not only used but made at Gerar,[127] it looks as if this Syrian iron culture spread as a sequel to the great Land-raids, and from the same quarter, namely, from Asia Minor.

In Cyprus, where the leaf-shaped sword is represented by two specimens in bronze,[128] there are tools and hairpins of iron from Minoan graves not later than about 1200, and then, rather suddenly, numerous iron knives and daggers, associated with "stilted" fibulae of South Ægean type, but also with fresh forms of seal-stones, vases, and geometrical decoration, which have their closest parallels in Asia Minor rather than in Syria.[129] Iron swords, too, are found occasionally, of a peculiar type, with flanged tang, handle plates secured by conspicuous rivets of silver or gilded bronze, like the Homeric swords, and leaf-shaped blade, sometimes very broad. But unlike the Danubian swords, these retain the concave-lozenge cross-section characteristic of the old native dagger and the earlier Minoan rapiers; a strange and not very serviceable compromise. This very broad blade reappears on representations of Syrian swords of the eighth or seventh century.

Both from Cyprus and from Carchemish, then, come indications that the source of the Palestinian iron industry is to be sought in the direction of Asia Minor.[130] That the "metal of heaven" was to be obtained there, is clear from the request of Rameses II to the Hatti king Hattusil, to send him this valued substance; but the reply, that there was no stock of it at the moment, suggests that it was not yet common, even among the Hatti.[131] In the eighth century, Assyrian kings were obtaining iron from Carchemish and from Commagene, in the Taurus mountains; but it is not certain whether it was produced there, or traded from beyond.[132] At the end of the seventh century, Tyre was obtaining "bright iron" from Tubal and Meshech, the Tibal and Muski of Assyrian annals, the Tibareni and Moschi of Greek geographers, in southeastern Asia Minor; and the Moschi are probably the last independent remnant of the Muski of previous centuries.[133]

It now becomes clear how it was that the classical Greeks acquired a fresh foreign word *chalybs* for "steel," in addition to *sideros*, the Homeric name for all sorts of iron. For *chalybs* reappears as the name of the Chalybes, another tribe of northeastern Asia Minor, adjacent to the Moschi, and recognized in antiquity as probably representing the Alybé country which lay beyond Paphlagonia in Homeric geography, and was a "birthplace of silver."[134] This source of steel became known to Greek traders through colonies of Miletus such as Trapezus and Amisus on the north coast of Asia Minor. As they were founded in the eighth century, and may have been preceded by mere coast factories and trading ventures, they carry Greek acquaintance with steel some way back; but not far enough to account for the swords of Halos or even those from the Dipylon cemetery at Athens.

Though of iron, the swords of Halos, like those of Cyprus, retain not only, as we have seen (p. 432), a rather early form of hilt, nearer to the Danubian original than some of the later bronze swords, but also a cross-section of the blade, which is not Danubian at all, but an inheritance from the Mediterranean dagger. They are therefore to be regarded as a rather early derivative from the Danubian sword, among people of more southerly culture, not progressively influenced by the course of invention in the north, but confronted once and for all with the new northern weapon, and thereafter left to their own devices. In what region or regions this occurred, we have now to enquire.

At first sight sea-borne communication between Cyprus and the Ægean (such as is presumed by the twelfth-century Sea-raids, confirmed by Homeric descriptions of such voyages, and authenticated by the leaf-shaped swords of bronze found in Egypt and Cyprus) might seem to be sufficient explanation; and it was probably this notion that prompted the identification of Temese, the destination of the Taphian's cargo of iron in the *Odyssey*, with Tamassus in Cyprus, where

there were extensive iron workings later. But to send iron to Cyprus was "carrying coals to Newcastle"; and the furnaces of Tamassus lie a full day's journey from the coast; moreover Temese in South Italy had the copper mines which the story requires, though they were exhausted when we next hear of them.[135] There is also, in support of this sea route, the rare occurrence of bowls of the same fabric as those in the tombs at Halos, in graves of the Early Iron Age in Cyprus, and of native imitations of them which show that they were scarce and valued there (p. 479).

On the other hand, it is clear from Homeric references, that the Achaean invaders of the Troad were obtaining iron there as loot, and trading it to Lemnos for provisions. Now the people of Lemnos are called Sinties in the poems, and Hephaestus, the divine smith, is at home among them. Other Sintian tribes were scattered about in Thrace in classical times; and a "great Thracian sword" is twice mentioned specifically in the poems, though its substance is not described. Both swords belonged to Trojans; one cut a man's head across, the other had the characteristic "silver studs" in its hilt; so they were slashing-swords not far from the leaf-shaped type. But were they of bronze, or of iron?

In classical Greece, the first working of iron was attributed to the legendary Dactyls, who were assigned usually to Mount Ida in the Troad, though there were other stories which referred them to Samothrace in the Cretan Ida and to Cyprus.[136] That there was an alternative story about legendary Telchines coming from Cyprus to Rhodes, again with a Cretan variant, is only to be expected in view of the later fame of Cypriote metal-working, and the later connections between Cyprus and Rhodes which are demonstrated by the cemetery of Lindus.[137] But the connection of the Dactyls with iron-working is specific; and the Parian Marble (supported by Castor and Thrasyllus) gives 1432 as a traditional date.

Once discovered, an art so valuable as iron-working may well have spread rapidly, among people who had use for it. This has been sufficiently illustrated by the wide connection between the first general use of iron, south and east of Taurus, and the new régime established by the Land-raiders. To the northeast, the same conclusion follows, as far as Caucasus and beyond it, from the association of the first iron weapons in Transcaucasia and the Koban cemeteries with fibulae of "Asiatic" type. The types of these weapons themselves however have neither the leaf-shaped blade nor the flanged tang, but are straight-edged, very broad at the heel, with a flat hilt of the peculiar double-concave outline familiar from Egyptian representations of Land-raiders. It looks as if this type of weapon had been in use in the region from which the knowledge of iron reached the Caucasus peoples, and this is confirmed by the bronze daggers from earlier graves. The "Asiatic" type of the fibulae makes it certain that this iron-using culture spread from the south, and that it did so not earlier than the introduction of fibulae into Asia Minor; probably also not much later. The source of the iron stores of the Hatti-folk in the thirteenth century was therefore south of Caucasus and north of Taurus, that is to say, somewhere in eastern Asia Minor; and the movement which extended iron culture as far as the Caucasus may be identified with that to which Herodotus alludes when he describes the Armenians of his own time as "colonists of the Phrygians." In country so rugged as that between Cappadocia and the Caucasus, such "colonization" was no doubt gradual. Indeed it is certain that the old Vannic language was not superseded by Indo-European speech until the eighth or seventh century.[138]

But this is not quite the whole story. Other features in the iron-using cultures of the Caucasus region recall, as closely, the later stages of the Danubian Bronze Age, and the beginning of the Age of Iron there; and as these points

of similarity are not supported by intermediate links in Asia Minor or Europe south of the Danube, it seems necessary to suppose that the connection was through the flat-land north of the Black Sea.[139] Here there are no physical obstacles between the Caucasus and the Carpathians, for the rivers, though broad, flow slowly and have been easily crossed at all historical periods. That most of the cultural loans were from the Danubian to the Caucasian peoples, is demonstrable in regard to the sword-chapes and so-called "racquet-headed" pins, which only begin in Caucasian graves at a late stage of their Hungarian development, and a bronze leaf-shaped sword, of about 1150 B.C., found nearly halfway along the suggested route across the steppe, proves at all events occasional traffic.

At first sight it is difficult to reconcile this Danubian influence on the iron-using culture of the Caucasus with the disappearance of the leaf-shaped sword from Hungary about two stages before it was matured elsewhere into that "Hallstatt" type which is found (both in bronze and in iron) in Tyrol and other districts south of the Danube, and widely in West-Central Europe. But, first, the Danubian loans to the Caucasus are considerably earlier than that event; and secondly, this disappearance resulted from the intrusion of iron-using people from beyond the Carpathians; since there is no trace of intrusion from any other direction, and iron swords of a different type, far inferior in workmanship and temper, appear about this time. If the development of the leaf-shaped sword may be provisionally reckoned as uniformly rapid, this crisis would appear to belong to the latter part of the twelfth century; that is to say, to the Greek traditional date for the "coming of the Dorians." But it is a further question whether there is any real connection here.

In one respect, however, it seems necessary to regard Asia Minor as chief, if not sole intermediary. It has already been noted (pp. 136–7) that, in Cyprus and the Ægean, the

earliest iron swords combine a rather early variety of the Danubian flanged hilt with a blade of concave cross-section, derived ultimately from the old copper dagger, but more immediately not through the Minoan rapier, in which the midrib is cylindrical, but from the wide-heeled sword of the Shardana; and this sword we have now seen to be closely related with the Caucasian types, and derived from an ancient tradition in Asia Minor. The question arises therefore: should not the iron swords from Halos, Athens, Crete, and other Ægean localities be regarded as derived from the same iron-working tradition? We have further to take account of the "great Thracian swords" in the Homeric poems, and to raise the question whether the "Chalcidian blades" famous in classical times were made wholly at Chalcis as has been commonly supposed, and as the recent discovery there of metal workings indicates or also imported into Greece from the Chalcidic colonies, in whose immediate backwoods were Thracians and also Briges or Brygii whom antiquity accepted as Phrygians-in-Europe.

A further consideration results from the distribution of alternative types of furnace, and processes of iron-making. It has been customary to emphasize the contrast between the rare and "precious" iron of the Minoan world, and the "copious" and useful iron of the Early Iron Age; and this contrast has been explained as resulting from the practice of alternative methods of iron-making.[140] In the "open-hearth" process, known to Egyptians of the Eighteenth Dynasty, and customary in classical Greece, in the Etruscan iron-workings in Elba, and until the nineteenth century in the "Catalan" type of iron-furnace, the scale of production is strictly limited, especially by the fact that a stage soon comes when the fire becomes unmanageable. It also has to be allowed to die down, so that the reduced iron may be collected; and as this iron is still spongy and needs to be consolidated by much hammering, the labor is dispropor-

tionate to the result; and moreover, this "wrought" iron is usually so nearly pure, that it cannot be tempered; though temperable steel may sometimes be produced accidentally.

In modern "blast furnaces," on the other hand, the process is continuous, ore and fuel being poured in at the top, and the slags and iron "tapped" from time to time at the bottom, and run into moulds without "drawing" the fire. The temperature may be sufficient to melt the metal, in which event the output is "cast iron," containing more carbon than is required for the production of steel; but it is possible both to regulate this carbon content, and to reduce it by subsequent treatment. Though the modern cast-iron process only became common in the fourteenth century A.D., remains of small primitive blast furnaces have been recognized, of Roman date on the Rhine, rather earlier in the Jura, and considerably older at Gyalar in Transylvania.

The Homeric description of the tempering of steel is not of itself conclusive as to the mode of production; but the reference to an ingot "self-poured" certainly refers to a furnace powerful enough to melt the metal as it was reduced from its ore. And this mass of "cast iron," like the "great Thracian swords" came from the Trojan side; it was loot from Eetion's town in the Troad; and large enough to provide five years' supply of implements for a farm. It is probable, then, that this great invention had already been made in the Asiatic iron industry, and that it was from this source that the blast-furnace process reached Transylvania and other parts of Central Europe. The ruined furnaces at Gyalar have not been approximately dated; but a lower limit is given for southeastern Europe at all events, by the rapid supersession of bronze swords by steel during the centuries—tenth to eighth—represented by the great cemetery at Hallstatt.

Summarizing, now, the results of this review of the earliest iron swords of the Ægean, we find that the popular

notion that they necessarily represent, or serve to prove, a Danubian inroad,[141] is inadequately supported by evidence, and results from a double confusion: (*a*) between the mature "Hallstatt" sword, of the tenth and ninth centuries, and the swords from Halos and the Dipylon, which are shown by their Egyptian counterpart to be nearer the twelfth; (*b*) between the leaf-shaped swords of bronze, which are Danubian, and have a convex cross-section with distinct cutting edges, and those of iron, whose concave cross-section betrays their Asiatic origin, though their flanged hilt and more or less leaf-shaped profile mark them as a result of an exploitation of Asiatic iron industries by conquerors of Danubian antecedents, namely, the "Phrygian" invaders of the thirteenth century. That swords of Hallstatt type came into Greek lands in classical times may be admitted in view of the representations of sword hilts in Greek vase-paintings, reinforced by a single "antenna" sword of the seventh or eighth century from so far south as Macedonia;[142] but the notion that the swords described in the Homeric poems are of Hallstatt type assumes either that the poems are at earliest of the tenth century, or else that the Hallstatt sword was in use in Greece centuries before it appeared at Hallstatt.

In view of these considerations, it does not appear justifiable to attribute the great changes in the distribution of peoples, and elements of culture, in the Ægean, primarily or even mainly to the irruption of iron-using folk. The leaf-shaped sword of bronze, indeed, had been the "superior weapon" of the Sea-raiders, and probably also of the Land-raiders, till they became masters of Asiatic iron-workers in the twelfth century. But the spread of iron-working westward through Asia Minor, and thence through Thrace into the Danubian region, was an effect, not a cause, of that conquest; and there is no positive evidence as to the weapons or metallic resources of the Dorian and Ætolian intruders at the close of the twelfth century.

Summary of Arguments from Funerary Ritual, Dress-pins, Swords, and Iron Weapons

We are now in a position to review the conclusions from four independent arguments, in so far as they contribute to the interpretation of the cremation tombs at Halos, and other deposits presenting similar evidence as to ritual, dress, swords, and iron weapons.

(1) Though the custom of cremation had become widespread in Europe before it appeared in the Ægean, its introduction in Greek lands was neither so general nor so persistent as to justify the belief that it resulted from any considerable immigration of fresh people from the north. Moreover, the details of the Homeric ritual, and of its nearest archaeological counterpart in the tombs at Halos, are in closer accord with those of the far earlier tombs in Leucas, than with any northern ritual older than that of the Hallstatt cemetery, which is quite as much later than the "Age of Heroes" as the tombs in Leucas are earlier, and is itself a better illustration of the gradual spread of new belief and custom, in a sedentary culture, than either of wholesale immigration or of conquest by well organized marauders. The proximate source of the ritual in Leucas must have been in the neighboring highlands of Epirus, immediately northwest of peninsular Greece, and consequently in or near the source of that spread of highland folk into Thessaly and Boeotia which Greek folk-memory attests. To account for Ægean cremation, therefore, it is not necessary to assume either a recent or a far-reaching movement. Cremation may have died out in those highlands as completely as in Leucas; but unless it did so—and on this point there is no evidence as yet—here is a source for Ægean cremation, without looking away to the Danube.

The alternative of more distant origin is of course not excluded; but Ægean evidence does not require it. In either event, the Homeric evidence attributes cremation to the "divine-born" dynasties and their Trojan contemporaries and counterparts;[143] and as there is no evidence that any Dorian state habitually practiced cremation, there is no reason to associate the spread of this custom specifically with the "coming of the Dorians."

(2) The distribution of the bronze leaf-shaped sword, on the other hand, points clearly to its introduction into Mediterranean lands, from Egypt and Cyprus to Italy, in a single short-lived series of movements which were going on about 1200, and may therefore be identified as one factor in the Sea-raids, and in the spread of "divine-born" dynasties in Greece; and its ancestral relation to the iron swords of Cyprus and Carchemish makes it probable that it was represented among the Land-raiders also. But it was not the only type of sword among either group of aggressors; and the commonest of its competitors was of old Asiatic origin, and persisted alongside of it into the Early Iron Age, from Syria to the Caucasus.

(3) The incursions of the bronze leaf-shaped sword were brief; but the type was adopted early by iron-working people who remained unaffected by the subsequent development of the bronze sword itself in the Danubian region. These iron-workers were therefore probably within the Mediterranean and Asiatic areas which the bronze-sword-users overran. Iron was already being worked in south-eastern Asia Minor by 1250, in Syria and in Cyprus not long after 1200, in Phrygia and Thrace probably not much later. As iron swords at Halos, and elsewhere in peninsular Greece, are all of the same derivative and regional type, there is no reason to attribute them to a Danubian source. Moreover, the general spread of iron-working in the Danubian region is apparently not earlier than the establishment

of the East Mediterranean iron centers; and the earliest iron swords in that region are derived from a different and probably later prototype. If the knowledge of iron reached the Middle Danube independently from Caucasus by a route north of the Black Sea, this is what might be expected.

But even if this knowledge was propagated by way of the Marmara region and Thrace, the differences between the iron swords of north and south make it unlikely that Ægean swords were copied from Danubian at this stage, even if their relative dates admitted this. There is therefore no reason to attribute the "coming of the Dorians" to the possession of a "superior weapon" in the shape of iron swords. There is, on the other hand, good reason to regard the leaf-shaped sword of bronze as evidence that at all events some of the Sea-raiders and Land-raiders, and among them the "divine-born" newcomers in the Ægean, originated in the Danubian region, though they cannot at present be shown to have brought much else from it with them, except their unintelligible names.

(4) Recent confirmation of the South Ægean and Late Minoan origin for the "violin-bow" fibula—so long disputed—is in accord with the geographical distribution of its derivatives into three principal provinces, corresponding respectively (*a*) with the range of the Sea-raids and of Arcadian-speaking settlers from Peloponnese; (*b*) with the districts of Central Greece and the Central Ægean within which Ionic and Æolic dialects had long been spoken, and where the general uniformity of fibula structure points to an initial period of easy intercourse, such as the peculiarities of Homeric idiom make it necessary to assume in the generations immediately succeeding the arrival of the "divine-born" and their Æolid associates; (*c*) with that of the Land-raiders as far as Carchemish, Palestine, and the Caucasus region, and, west of the Marmara region, with the large Illyrian province where the twin-spring fibula remained characteristic without further change of design.

This has its linguistic counterpart in the distribution of Thraco-Phrygian speech, with its Armenian annex eastward, and the Illyrian group of dialects toward the Adriatic.

(5) On the other hand, the quite different structure, sporadic distribution, and eventual Spartan domicile, of the "spectacle" fibula point to the spread, restricted both in amount and in duration, of one significant element of a culture of Danubian origin. But (as we have already seen in regard to cremation) there is at present nothing to show that the source of the proximate redistribution was distant. The discrepancy between the distribution of "spectacle" fibulae, and of iron swords, is at present too great to admit the assumption that these two elements are necessarily connected. Nor is either of them originally connected with the practice of cremation.

(6) On the other hand, the distribution of "spectacle" fibulae in peninsular Greece corresponds rather closely with that of the little horses and birds in bronze and clay. As, however, these figures do not seem to be characteristic of the more northerly regions which have the "spectacle" fibula, it looks as though their northern limits—Dodona and Macedonian sites—may be not far from the cradle of a mixed or transitional culture, somewhere in the northwestern highlands; and we have already seen reason to look in the same direction for a common prototype of the cremation rituals of Leucas and Halos.

(7) It has next to be noted, as an anomaly needing to be explained, that the distribution of the "spectacle" fibula lies astride that of the symmetrical or twin-spring fibula; the former ranging far from north to south, between the Danubian cultures and peninsular Greece, the latter even more widely from the Adriatic to Syria. The "symmetrical" fibulae, however, fall apart, as we have seen (p. 420), into two groups, a western in which the catch-spring was retained, an eastern wherein it was replaced by a solid collar; and

though there is at present one example of the western type as far east as Chauchitza,[144] it is there associated with "spectacle" fibulae along the main avenue between their Danubian and Ægean domiciles. It is to be inferred from this anomalous distribution, that the separate development of "symmetrical" fibulae, eastern and western, resulted from segregation, and this segregation, in turn, from subsequent spread of a culture with "spectacle" fibulae, the upper limit of date for which is supplied by that for the differentiation of the two "symmetrical" types. And this has been attributed already to the spread of the Land-raider régime. The culture, then, which included the "spectacle" fibula may be supposed, provisionally, to have been spreading from the north by way of the Morava-Vardar avenue, not long after the beginning of the twelfth century. It remains, however, a further question whether its southward spread was immediate and continuous, or whether, as the figures of horses and ducks suggest, there was some kind of pause, and interpenetration between this and an older culture already established to the northwest of the Ægean; in the highland region, that is, which overlooks both the Macedonian and the Thessalian lowlands, and is at present so ill-explored.

For an answer to this further question, we have once again to recur to the cremation graves at Halos, and examine the decorative art which is exhibited by their painted pottery.

The "Concentric-circle" Ornament at Halos and Elsewhere

The pottery from the cremation tombs at Halos inherits its shapes and technique from the latest Mycenaean fabric. Part of its painted ornament—lattice triangles and other rectilinear patterns—is of the same tradition; what is new and characteristic is the "concentric-circle" ornament, to

be described in detail later (p. 452). Sometimes the intention was to draw semicircles only, as in a common Mycenaean ornament; but in these instances the circle ornament was drawn first in full, and then the lower half was obliterated with a solid band of paint. Pots of similar style and decoration have a fairly wide and very instructive distribution; on several sites in eastern and southern Thessaly and in the island of Scyros; at Orchomenus and Delphi; at Athens, Eleusis, Salamis, and other sites in Attica; at Tiryns and elsewhere round the plain of Argos; frequently in the eastern half of Crete, occasionally in the Cyclades, at Camirus in Rhodes; on the Carian coast[145] at Assarlik, and in the earliest Hellenic layer at Miletus.[146] Outside the Ægean, the concentric-circle ornament reappears in a late or reoccupied "beehive" tomb on the west coast of Peloponnese; in Cephallenia; and in native painted wares of post-Minoan but pre-Hellenic date in South Italy and Sicily.[147] Eastward, it is recorded on the later "Philistine" pottery at Gezer;[148] and in Cyprus it appears early in the Iron Age, though not quite at its beginning, and attains there a wearisome vogue, almost exclusive of other designs.[149]

The distribution thus outlined follows rather closely that of the "unsymmetrical" types of fibulae; and if the later occurrences of the concentric-circle ornament, as a subsidiary element in later Iron-Age styles, be included, the connection becomes clearer still.

But this is not the whole of the story. North of Thessaly and Scyros, imported pottery ornamented only with concentric circles is characteristic of the earliest Iron-Age layers on Macedonian sites,[150] and replaces Mycenaean imports in the "seventh city" at Hissarlik.[151] These examples may all have come from peninsular Greece; but there is concentric-circle ornament on native wares from sites in Cappadocia and inland Lycia, and the concentric-circle appears as enhancement in the rich geometrically-painted pottery of

Gordium in Phrygia, in local fabrics from other parts of the plateau, and on vases from tombs near Carchemish which may be from Cyprus, but may on the other hand indicate a mainland origin for the peculiar fabric to which the Cypriote examples belong.[152]

Two questions therefore arise; as to the source of the concentric-circle ornament itself, and as to the reason for its wide distribution over the region of Land-raiders and "symmetrical" fibulae, as well as in the Ægean and the Levant, where fibulae are "unsymmetrical."

If we could be certain that the vogue of the concentric circle in Cyprus was due to loan from the Ægean, it would be reasonable to attribute the spread of this ornament into Syria and Asia Minor to Cypriote intercourse. But Cyprus, as we have seen from its fibulae, lost touch with the Ægean early and almost completely, after the Sea-raids; and though a very few Ægean-made examples have been found in Cypriote tombs, they belong to a period when the native school of concentric-circle design was already well established; moreover, the shape of the imported bowls, though occasionally imitated at the time, did not permanently influence the local potters.[153] The alternative therefore cannot be excluded that Cyprus received the concentric-circle ornament, not from the Ægean direct, in this chance fashion, but as an element in the new iron-using culture which it now acquired from the neighboring mainland.[154] Only exploration of a Cilician site can decide this point; but the surface finds from Lycia and Cappadocia are instructive. Much more important is the question, whence did either of the two main areas of concentric-circle painting acquire this decorative device, and what reason is to be given for its sudden and widespread popularity? The problem has a technical as well as a historical interest; for this is an early, and perhaps the first, example of a purely machine-made ornament.

All devices for boring or drilling are liable to produce concentric grooves, especially in compact materials such as wood, bone, or soft stone; and the decorative value of such drill holes has been appreciated in many primitive crafts.[155] In clay, the drill is replaced by the punch; but the merely circular punch, usually a cross-cut reed, is occasionally provided with a center-point, or even "nested,"—small reeds within larger—or replaced by a solid drill-marked stamp.[156] With the invention of the lathe, concentric decoration of wooden bowls and flasks becomes as common as concentric painted designs on wheel-made plates; and in the Early Iron Age of Cyprus, and more rarely in the Ægean, narrow-necked jugs were sometimes poised sideways on the wheel and painted with "vertical circle" ornament transverse to the normal wheel-painted bands; a curious false analogy from the vertical bands appropriate to flask and barrel vases, imitated from lathe-turned woodwork.[157] This however was a freak, the vogue of which follows that of concentric-circle decoration in the strict sense.

In textiles, where circular patterns are necessarily replaced by rectangular ones, concentric squares or lozenges result from certain kinds of twilling, and are appreciated for an optical illusion of depth, which they give. Like concentric circles, these rectilinear designs, self-contained themselves, pass by accidental or deliberate displacement, into running patterns; circles into coils and wave patterns, squares and lozenges into "key-fret" or maeander.[158] As neolithic decorators along the Danube and in Bosnia knew, spiral and maeander are variants of the same ornamental motive.

In addition to the peculiar fascination of the running coil, whence its aesthetic value springs, the concentric-circle, though self-contained and statical, gives an optical illusion of spontaneous movement when the decorated object is gyrated; when this printed page, for example, is moved

clockwise, each system of circles seems to spin in the same direction. Here is a "giver of life" as impressive to the unsophisticated as it is curious to the psychologist.

In the Ægean, Cycladic potters did not easily distinguish, at first, between spirals and concentric circles, and sometimes intermixed them.[159] The spiral, however, prevailed in Minoan ornament, and concentric circles remain very rare until the Mycenaean decadence was almost complete. Then they reappear, together with concentric semicircles, as one of numerous bungling substitutes for the rosette or full-face-flower pattern; but these circles are still so clumsily hand-drawn, as to be optically inert.[160]

Fig. 16.—The "Concentric-Circle" Ornament.

Then quite suddenly, the compass-drawn concentric-circles appear, made with a bundle of small brushes mechanically rotated round a pivot. Applied to unfired clay, this pivot leaves on the "center-point" an imprint, usually quite ill-concealed by a dot of paint. The varying flow of paint from the brushes reveals every detail of the mechanical process. Whether the multiple brush was already in use as a labor-saving device for wheel-drawn bands, or was borrowed from the concentric-circle graver is not certain, so nearly simultaneous is the appearance of both ornaments. Once invented, this compass-drawn design had a wide vogue, as we have seen; and the uniformity of the first fabrics employing it shows that in the Ægean at all events it spread rapidly, and in some districts (or potteries) almost completely superseded hand-painted ornaments.

For its origin, the Macedonian sites alone are sufficiently well stratified to display the precise sequence of events. Here the later Bronze-Age layers contain a considerable quantity of imported Mycenaean pottery of the latest styles. But on all sites hitherto excavated here, this period was ended by a complete destruction of the settlement by fire, about the middle of the twelfth century.[161] Some were reoccupied almost at once, but now, among much that is a survival from the former culture, there are two new fabrics of pottery. One of these is wheel-made, of Ægean fashion, and decorated almost exclusively with compass-drawn circles, like the vases at Halos, testifying to renewed intercourse with the south, oversea. The other is hand-made, dark-colored, without painted ornament, but either grooved or embossed or both; and the handles are often twisted, like a strap or a rope, and furnished with a projecting thumb-hold; and similar handles are found on vessels of indigenous fashion also.

Similar, though not quite identical, pottery with fluted bosses is characteristic of the "seventh city" at Hissarlik, which superseded the "sixth" after quite as violent devastation as occurred in Macedonia;[162] and the peculiarities of both fabrics are sufficient to demonstrate the cause; for they belong to the well-marked technique of the "Lausitz" culture, which had spread, from small beginnings in Silesia, over a large part of the Middle Danube basin, and is recognized also in the "Buzau" culture of certain districts of Thrace.[163] From the contents of tombs at Marmariani, a little south of the pass of Tempe, and on a few other sites in Thessaly,[164] it is clear that the devastators of Macedon pressed on farther south, though not in great numbers, nor did they maintain themselves for long.

But their twisted handles and embossed vessels left their mark. For when the concentric-circle ornament is drawn on a large scale, still more when it is partly obliterated by a dark

band, as on some of the pottery at Halos, it gives the illusion of an embossed and concentrically grooved surface, like that of the Lausitz ware. The suggestion, therefore, that in that fabric of pottery we have the model for the concentric-circle designs in paint, is probably a sound one. It must be supplemented, however, by the proofs that the makers of it were also acquainted with lathe work and the use of the compass drill. Now this is supplied, first, by the occurrence of drilled circles on local Macedonian pottery of much earlier and also of contemporary date,[165] and of the concentric-circle on gold work from the same Macedonian tombs as the circle-painted pottery;[166] secondly, by its use as a supplementary ornament on pottery of the "Pannonian" phase of Danubian culture,[167] not long before the Lausitz migration to the southeast; thirdly, by the great vogue of concentric-circle ornament in the culture of the districts round the head of the Adriatic at the beginning of the Iron Age; differently handled, indeed, in detail, but associated here too both with embossed and grooved pottery and with the decorative use of concentric drills and punches on suitable materials;[168] and moreover with the socketed celt which seems to have been the peculiar invention of the Lausitz people, and one reason for their rapid spread.[169] Fourthly, in view of the persistence of forest life in large regions northwest of the Ægean, and consequently of circumstances favorable to the perpetuation of woodcraft, it is significant that among the Serbian peasantry the practice of concentric-circle decoration on wooden flasks survives to modern times.[170] On knife handles and other bone work it is quite widely used throughout the Near East.

The derivation of the concentric-circle pattern here discussed is confirmed by the consideration that, whereas in most parts of the large region which it pervaded, it becomes only one among many components of a very mixed repertory, it is in Macedon and Thessaly especially that it first appears

as the sole ornament of a distinct class of pottery, and it is only where it thus dominates the style, that it is employed in that experimental fashion already noted, whereby part of the circumference either was not drawn or has been deliberately obliterated by a broad zone of paint. This monopolist style is found also sporadically elsewhere in the Ægean, as already noted, but only in a very few vase shapes; so the centers of production may have been few.[171] That, alongside of this restricted monopoly in the Ægean, it should have attained its overwhelming popularity in Cyprus, rivaled only by the dissected panels to which further reference must be made (p. 480), is strong testimony to its intimate connection with the movement of which the "seventh city" at Hissarlik is the monument, and at the same time to the extent and importance of that movement.

Another ornament, at first sight closely related by its technique to the "concentric-circle," is what in describing Cypriote examples has been called the "tangent-circle," but is easily recognized as a mechanical reproduction of the more widely spread "pot-hook spiral."[172] The latter is yet another example of the substantive use made of a borrowed detail. In the "tangent-circle" the concentric circles are drawn only three-quarters round, and then continued by tangential lines to the border of the zone or panel. It is found fairly often in Cyprus,[173] occasionally in Asia Minor—so ill-explored as yet—and sporadically in the earliest geometrical styles of the Ægean. Its unmechanized prototype, the "pot-hook spiral," does not appear in Cyprus, but is commoner in Asia Minor,[174] and is found on Macedonian pottery after the devastation,[175] and also just before it. In this instance, the northern connection is very clear, for not only are there incised as well as painted spirals on Macedonian pottery, but detached spirals are found incised on Pannonian pottery and other Danubian fabrics of the

Late Bronze Age.[176] In the Pannonian fabric it may be seen gradually detaching itself from the "running coil" and becoming a substantive ornament.

Significance of the Macedonian Evidence for Danubian Invaders

This discussion of the culture of the northern invaders of Macedon, and especially of their peculiar pottery and the painted imitations of it, may seem at first sight irrelevant, seeing that in Greek lands no such fabric of pottery was introduced at all. But it has this positive conclusion, that it forces us to look elsewhere for the sources of the decorative art of the Early Iron Age in Greece, and gives us also a clue to that source. If the invaders came on as far as Thessaly, and if Macedon was reoccupied by its old population behind them, it was not from the north that any subsequent influences came; and indeed the reconstructed Macedon became, right on until the coming of the Gauls, just such a screen or shield between Greek lands and Central Europe, as Thracian and Phrygian Land-raiders erected between the Ægean, the Steppe, and the Nearer East. Secondly, if these invaders did not themselves influence the subsequent culture of Greece, any new element which appears within the Ægean region must either have been there already, or must have been propelled southward in front of them; and this necessarily directs enquiry to the districts which Herodotus believed to have been the nursery of the Dorians.

At Halos, side by side with concentric-circle decoration, degenerate Mycenaean ornaments survive, though reduced to the simplest rectilinear forms; and elsewhere too, there is the same mixture of techniques. To distinguish, therefore, between a "circle style" and an "angle style" of ornament, is to contrast localities and tastes rather than periods. But this contrast is itself instructive, as one proof, among many,

how completely the whole Ægean region was now split up into small isolated districts and communities, within the larger and earlier-established areas of intercommunication inferred from the fibulae, and confirmed by the distribution of Greek dialects and traditional affinities in historic times.

The sites of many settlements and cemeteries of the Early Iron Age are eloquent as to the cause. It was prevalence of piracy, as Thucydides knew,[177] that withdrew the abodes of men from the seaboard, and perched them high on the hillsides, or better still, on a detached *acropolis* like Tiryns or Athens, commanding the cultivable lands. The same cause produced the same results in medieval times, and it is only within the nineteenth century that the settlements have crept down to the water's edge, and the local styles of embroidery have been contaminated and superseded by the products of "manufacturing centers," as Corinthian and Athenian fabrics obliterated the geometric arts of Argolis, Euboea, and the Cyclades. And piracy at sea was the counterpart of anarchy ashore. It was the collapse of feudal empires like those of Atreus and Laomedon, as much as any "Dorian conquest," that brought about this insulation. It is not easy, without archaeological record, to discount later boasts about "reuniting the heritage of the Heracleidae."

Nevertheless, the disorganization wrought by the "migrations" on which Thucydides in particular laid so much stress as a factor in the upbuilding of a Greek people, was so widespread and intense that it is necessary to take account of its causes. The older allusions to the "coming of the Dorians" are meager but precise. "Springing from Pindus," they were in occupation of upland Doris, on the north side of Parnassus, in the generation of 1230, when they incorporated the remnants of the "children of Heracles," Perseid exiles from Argos, after their unsuccessful attempt to re-establish themselves there. The date of this is assured by the co-operation of Theseus in this raid, and by the attribu-

tion of their defeat to the adventurer Atreus, who made use of this disturbance to make himself master of Mycenae. The hundred years' interval between this and the second "return" resulted from a reasonable (and probably customary) method of putting "on parole" everyone then living; so, too, in classical Greece, and for the same reason, treaties were often made for thirty or for a hundred years.

The Dorians, then, came south, not "out of the blue," but with good folk-memory of their antecedents.[178] Herodotus carried the story farther back. They had formerly lived in Phthia, like other "children of Hellen"; they had spread northwards toward Olympus and Ossa—and one section, as we have seen (p. 346), wandered oversea to Crete during the Æolid movement, about 1330—; they had been driven into the highlands by Cadmeian aggression; and so they "came to be called Macedonian." It was in the days of Ægimius (that is to say before 1230, for it was he who incorporated the "sons of Heracles") that they moved south into Doris, but as the silence of the *Catalogue* shows, they were no vassals of the House of Atreus, and were indeed harboring its declared enemies. Clearly, unless Greek folk-memory is for some reason less trustworthy here than in regard to other sorts of Greeks, a devastation of Macedon as late as 1150 was not the cause of the Dorian "springing from Pindus" before 1230. Still less was it that exodus itself, though it may have been the occasion of the southward move from Doris to Peloponnese which is genealogically dated to the generation of 1130. Nor, on the other hand, if the Dorians were south of Thessaly before 1200, may we assign to them any responsibility for the pottery, the iron swords, or the fibulae of the cremation tombs at Halos (p. 425), which are certainly later,—and perhaps by generations,—than the devastation and recovery of the Macedonian sites, and the intrusive culture of Marmariani.

Much light would doubtless be thrown on the whole question, if one of the numerous small settlements in Doris were excavated. Till this is done, all that is permissible is to summarize what is known of early settlements in the Pindus highland.

The Backwood Culture of the Pindus Highland

In this connection account has to be taken of one peculiar fabric of geometrical pottery, both for its style, and for its distribution so far as it is known at present. An early village site at Lianokladhi, on the southern foothills of Mount Othrys, overlooking the Spercheius valley, had already passed through the phases of "painted-ware" and "smear-ware" culture, common to all northern and central Greece, when it was devastated and reoccupied by its "third culture," with hand-made pottery, the painted decoration of which is purely linear, without any brushwork at all; and "the remarkable points in the pattern are its division into panels, and the placing of spirals at the top of the vertical bands."[179] As it had no counterpart, at the time of its discovery, in central or in northern Greece, it was natural to ascribe it to intruders "from over the passes of Tymphrestus," the watershed of this part of the peninsula, "for if they had reached the Spercheius from any other direction, some traces of their coming would almost certainly have been observed."

Subsequent excavation on a similar but confused village site at Boubousta in the upper valley of the Haliacmon, northwest of Thessaly, shows similar pottery ornamented with chequers, lattice triangles, and maeanders, but here "quite unmixed with the alien styles, Mycenaean and other" which have made it difficult to recognize the essential connection of scattered examples of similar shapes and ornaments distributed between the Spercheius valley and central

Macedonia.[180] Very late Mycenaean sherds in the same layer at Boubousta are probably a safer clue to relative date than the "gray ware" which accompanied the geometric pottery at Lianokladhi,[181] and gave an impression of antiquity which was not supported by some of the forms, nor by the most peculiar details of the decoration, of the "painted ware": for these all suggest the influence of the same phase of Mycenaean decadence as is actually represented by sherds at Boubousta.[182] To judge only from the geographical range of this "backwood" style, it reveals a last refuge and long survival of the old "painted-ware" culture of Thessaly, superseded elsewhere by the northward spread of the "smear-ware" and "gray-ware" cultures (p. 264). The Haliacmon valley is an alternative to the pass of Tempe for intruders from Macedon into Thessaly; but the descent of the "third culture" upon Lianokladhi occurred too early to have been the result of pressure from the Lausitz devastators of Macedonia. It is not however impossible that this descent may mark a stage in the southward movement of people who had originally been Thessalian, and had been driven into the highlands on one or more earlier occasions. There is however at present nothing to connect the "third culture" at Lianokladhi with spectacle fibulae, or bronze horses and ducks, or any peculiarity of early Dorian culture in Peloponnese except the geometrical style of decoration; and that, as we shall see later (pp. 476–83), is not peculiarly Dorian.

This irruption of a "backwood culture" at Lianokladhi is, however, notable commentary on the Greek tradition, that the Dorian invaders were "children of Hellen," that is to say, Greek-speaking tribes, who had been driven out of northeastern Thessaly into the highlands of Pindus not earlier than the generation of 1360; that they were in some

sense a "Macedonian people"; and that they descended again from their highland retreat not later than the generation of 1230, which is approximately the date of those Mycenaean ornaments which Lianokladhi potters imitated.

That the same folk-memory made the resultant Dorians tripartite, and made their three tribes reflect, in their respective names, refugees from the south (*Hylleis*, from the son of Heracles), highlanders of the northwest (*Dymanes*), and a mixed multitude (*Pamphyloi*) of "all sorts of tribes," is even more noteworthy; and that their first rallying ground should have been within the highlands on the south side of the Spercheius valley, where the name Doris survived (and perhaps originated as a description of the collective exodus), agrees with the southward limit of their home-land so far as Lianokladhi supplies evidence for it. It must be remembered, moreover, that while strictly Dorian dialects are only found south of the Corinthian gulf, West-Greek dialects closely related to them spread over a large area of Central Greece, between Æolic-speaking Thessaly and Boeotia; that this spread deranged the political geography of the Homeric *Catalogue;* and that Greek folk-memory preserved a date, 1120—sixty years after the fall of Troy—for the "migration from Arne" which was clearly an incident of it.

From the purely linear decoration of the pottery at Lianokladhi, however, to the complex geometrical style of Boeotia and Attica, it is a long way: at most, this irruption of so purely abstract a style may have provided the craftsmen of the latest Mycenaean decadence with elements of that linear technique which their compositions were beginning to display, and may so far have contributed to the formation of the new school of design, of which account will have to be taken in Chapter VIII.

Summary of Conclusions as to the Period of Collapse and Migration

Account has now been taken of all the principal symptoms of disturbance revealed by material remains, during the period of collapse and redistribution which Greek tradition recorded and archaeological discoveries demonstrate.

The result, on the whole, is to show that, though on two distinct occasions fresh people and fresh elements of culture were intruded into peninsular Greece, as they were also into Asia Minor, the physical obstacles were sufficient to break up intruders into parties so small, that either they did not penetrate far in any coherent formation, or, like the "divine-born" adventurers, they maintained themselves as a rather exclusive aristocracy, feudally knit, and liable to collapse and disappear when personal loyalties were overstrained or outworn, as we see in the personal feuds of the *Iliad* and other "Lays of Wrath," and in the tragic home-comings of the *Odyssey*. With the fate of the Lausitz people, we may compare that of Brennus and his Gauls, contrasting it with Galatia oversea; the pendant to Achaean feudalism is the Frankish conquest of the Morea, with its Dukes of Athens and Clarence, with Frederic Barbarossa in the part of Tithonus, and the Latin Emperors of Constantinople in those of Laomedon and Priam.

On the other hand, even the "coming of the Dorians," far-reaching in its social and political effects, turns out to have been essentially a domestic affair; a redistribution among tribes already Greek-speaking and recognized as members of a "Hellenic family." They had been "very migratory" as Herodotus insists; but they had kept their folk-memory since they "grew strong in Phthia"; if they had "mingled among the heathen and learned their works"

in matters of pottery and dress-pins, "their poverty and not their will consented." To them as to their forefathers, the "children of Hellen," opportunity came when people "brought them in for aid to the other cities"; and it was "severally, by intercourse rather," that they and those they overran realized their common nationality. How that Hellenic nationality gradually found expression, we have still to enquire; and once again it is from material evidence that we are able to interpret the few literary monuments that have been transmitted from that dim nursery.

CHAPTER VIII

THE MAKING OF A NATION

Mention has already been made of the difference between the naturalistic, representative art of the Minoan world, and the abstract, linear, geometrical style which pervaded the Greek cradle-land in the centuries after the collapse of that culture.[1] What was the origin of this peculiar style, and what is its significance in the culture of which it is the only material element at all fully illustrated by contemporary evidence?

If a problem of this kind is to be solved, it must first be stated clearly. Decorative and representative art alike, as has been hinted already, emerge when the performer of a purposeful act, or the maker of an object for use, deliberately behaves or fashions with another aim in view besides the need which prompts him to do this kind of thing at all; namely, the aim of enhancing his work in respect of its mode or form, so that it approximates to some standard of perfection present to his own consciousness as he proceeds. This approximation to a standard of achievement is what we call "style"; and perfection of style is beauty in art. When a potter, working in red clay, endeavors to make his pots not only serviceable but also of a certain redness, we speak of him as working in a "red-ware style." When he fashions clay vessels so that, with due regard to the limitations of clay technique, they resemble metal work or leather work or basketry, he is working in a "metal style," or "leather style," or "basketry style": in general terms, his style is "skeuomorphic." When he applies to the fashioned surface a decoration which, while contributing to the beauty

—that is to say, to the perfection of style—of the vessel, is itself independently appreciated as expressing something distinct from its shape or its utility, he is working in a "free-field" style, in the sense that the surface which he thus enhances is for his immediate purpose a "canvas" or *tabula rasa*, susceptible of such decoration. The subjects of such "free-field" art may be abstractions, such as a circle, spiral, or triangle; or they may depict plants, animals, and persons, or situations and events involving any or all of these; one man rescuing another from a lion among trees and rocks, for example, on a dagger blade which is none the less a serviceable weapon. All but the highest achievements of representative art are, however, qualified or "controlled" by their materials, and in that sense there are marble styles and bronze styles of sculpture, and a water-color style in painting. Brushwork and line drawing too, differ profoundly in style for the same technical reason; and lyric from epic.

In all styles, whatever the circumstances which qualify and define them, the artist may be mainly concerned to conform to current procedure and technique, or he may attempt to transcend them; in the same way as a traveler either fords a stream like his predecessors, or devises stepping-stones, raft, or bridge so as to cross dry-shod. This aspiration to mastery of controlling circumstance sometimes finds amazingly rapid realization. But whether rapid or gradual, realization of approximate mastery is commonly followed by imitation more or less exact and deliberate; and with the lapse from initiative which this implies, conformity leads either to pedantry or to carelessness; in either event it leads on to relapse and degeneracy of style. This too may be rapid or slow; and commonly exhibits the perverted ingenuity of the "short cut," characteristic of work into which the craftsman is consciously not putting his whole self, but is looking forward or back-

ward to something else—pay, or repose, or lost liberty—that shares his attention with the matter in hand.

This is especially noticeable whenever the artist's interest has been distracted from his customary technique by experience of unfamiliar and impressive craftsmanship. The epic poet complains that his audience prefers new songs to old; candid critics and customers demand of the craftsman "something like" the foreign object recently acquired by a neighbor. In decorative art a common result is an attempt to introduce prominently the new notion in an otherwise conventional design, deposing in its favor what was itself but recently novel; abbreviating and simplifying discarded themes to suit the subsidiary place now accorded to them; and degrading still further what was recently secondary, and had once been the principal object of display. This is what has been described as the "hierarchy of styles."[2] Its manifestations are a valuable clue to the antecedents of an artistic school and often serve to revise, or confirm, other evidence for the sequence or interdependence of styles.

These general considerations may enable the peculiarities of the geometrical art of the Early Iron Age in the Ægean to be analyzed, and in some measure explained.

Retrospect of Decorative Styles in Ægean Art

Some confusion has resulted from comparisons between this "geometrical" style and other styles which have been thought to resemble it, but have a different origin and character. Both in the Cyclades and in Crete, before pot-painting was practiced (pp. 216–7), vessels of clay were decorated with ornaments which were linear because incised, and rectilinear because they were mainly derived from basketry. But though skeuomorphic, this style of decoration is not strictly "geometrical," because the intention to reproduce an appearance of basketry is evident, when the result is considered as a whole. When these decorations were super-

seded, however, they were approximating to a "geometrical" style, in the sense that elements of basketry design, such as triangles or lozenges filled with lattice work, were being separated from their context, and delineated as substantive ornaments on the "free-field" offered by improved surface technique, both in the Cycladic red-ware, and in the black-wares of Early Minoan Crete (p. 229).

When pot-painting was introduced into the Ægean, some of these linear designs were incorporated, along with fresh skeuomorphs of similar origin—the suspension bindings of gourds and other handleless vessels—into a composite style which included also curvilinear designs; some abstract, such as the circle and spiral, others representative—foliage, sea shells, and the like. Nowhere did this composite Minoan style become, strictly speaking, "geometrical," for the ornaments, however carelessly drawn or crowded, remain substantive occupants of a "free-field," either the whole surface of the vessel, or, more commonly, a continuous "zone," bounded above and below by lines or bands which are characteristic skeuomorphs of wheel-made pottery, but laterally limitless, so that the pattern if accurately drawn is continuous and returns into itself.[3] At this point, it should be noted, a fresh distinction has emerged, between the "free-field" treatment, strictly so called, and the partition of the available surface into zones. In the great days of Middle Minoan polychrome, vases were habitually decorated in "free-field," from rim to base, with splendid effect, even when wheel-made themselves.[4] Stone and metal-work were similarly decorated, and gem-engraving and relief-modeling matured on similar principles, without wasting space on a frame. Fresco-painting, too, reveled in wide friezes, occupying the whole wall-space or most of it. Even within zones, running patterns were popular, and it is this which accounts for the great vogue of the spiral, and its "poor cousin," the wavy line, sometimes elaborated into fantastic foliation.[5]

Meanwhile, in Thessaly numerous experiments had been made in surface decoration, on quite different principles.[6] The component elements of these designs include basketry, spirals either in zones or detached to fill interspaces in a linear scheme, other skeuomorphs derived from the technique of smearing or burnishing—with which we might compare the "engine-turned" decoration of nineteenth-century watch cases—or imitating leather straps and seams such as are conspicuous in certain painted wares of Cyprus. But whatever their origin, these elements are applied to Thessalian pots not as substantive representations on a "free-field," but to cover the whole surface of the vessel irrespective of profile or even of such accessories as rim or handle. It is as though the vessel were cut out and put together in some patterned material, like a plaid or twill. A similar decorative effect is popular with the sailmakers of the Adriatic coast of Italy, who deliberately combine different-colored sailcloth in bizarre patchwork. This procedure has been ascribed to an aesthetic *horror vacui;* but though this might account for the filling of interstices with spirals or lattice work, it does not explain the utter incoherence between the framework containing those interstices, and the form of the vessel, which it camouflages like a ship's hull in war paint.[7] This Thessalian style, as we have seen (p. 251), gradually faded out, at all events for potter's work, though it may have persisted in other materials, and though later styles of pot-painting in the Pindus highland seem to inherit from it, at Lianokladhi and Boubousta (p. 259).

On the other side of the Ægean, far back from the coast, another painted style is found to have been established widely in Cappadocia, certainly during, and probably before, the political régime of the Hatti. There are however at present no clear dates for its beginning, nor even for its end; though it certainly outlasted the Hatti. As acquaintance with the painted pottery of Cappadocia increases, recognition of its

original dependence on immemorial traditions of painted ware at Susa is qualified by the doubt whether this is the sole source of its technique or repertory. There is a waywardness of design, an unconformity between vase form and decorative scheme, which is alien to the frank skeuomorphism of Susa, and recalls the "patchwork" incoherence of Thessalian decoration, to which reference has been made. But only systematic excavation of stratified sites in northwestern as well as central Asia Minor can decide whether the trans-Danubian "painted-ware" culture traversed the Marmara region as well as Macedonia. There is certainly no sign of it at Hissarlik. But Hissarlik is not on the only crossing, nor even on the most direct. Sites on either side of the Bosporus may tell a different story. The point is only relevant to the present retrospect of Ægean decorative styles, because eventually, as we shall see, the painted ornament of Asia Minor contributes to that of the Ægean; and at a considerably earlier stage to that of Cyprus (p. 480).

The Thessalian painted style faded out. Of the styles which superseded it, the dull "smear-ware" had very little decoration at all, and what it had was skeuomorphic; while "gray-ware" abstained from applied ornament, and relied on masterly profile, prominent accessories—especially handles and foot—and scrupulous uniformity of color and finish. These "gray-ware" qualities, transmitted to the "buff-ware" of Argolis, differentiated the Mycenaean handling of pot-paint from that of Late Minoan Crete. And the same technical proficiency, reinforced by the labor-saving device of a high-speed wheel, gave this mainland fabric two other peculiarities, its bold distinctive profiles, and its restriction of hand-wrought ornament to a single shoulder zone, the rest of the surface being machine-finished by a sequence of plain bands. It was an almost inevitable enhancement of this mechanical decoration, to group broad

and narrow bands more or less rhythmically; a ceramic "jazz," infectious, pervasive, soul-destroying, as all rhythmical vulgarities are.[8]

Demoralized by these mechanical aids to mass-production, Mycenaean ornament rapidly went from bad to worse. The stately designs of iris and papyrus from the Cretan palace repertory became starveling symbols; Minoan sea pictures, immortalizing like Japanese color-prints the *joie-de-voir* of fisherman and sponge-diver, were reduced to the conventional "octopus" and a "cork-screw" ornament (fig. 17.b) which was once a triton shell. In the remote Cypriote colonies, chariots, bulls, and birds lasted longer,

Fig. 17.—Examples of Wheel-made Rhythmical Decoration.

and became more grotesque, mainly because, as the Arcadian dialect of Cyprus shows, no one came to interfere with them.

Such a decline in decorative art is quite compatible with material comforts and vigorous activity in other directions. It has even been claimed[9] that this aesthetic *dégringolade* is democratic, a symptom of greater happiness for a greater number. Perhaps, too, in art, for the greatest number the greatest happiness is "jazz." It should be noted, however, that it begins about 1400 with the first grave political catastrophe; that its onset was rapid, for degeneration is far advanced in the Mycenaean pottery at Tell-el-Amarna about 1360; that its vogue closely covers the period of adventures and disturbances; and that the effect of such disturbances inevitably was to diminish security for artisans

and to restrict their share of the proceeds of their labor, however widely it distributed their wares. Conquered people do not work wholly for themselves—the conquerors take good care about that—and the paralysis of artistic verve, as of technical honesty, may be illustrated almost wherever conquest has occurred.

In the more troubled region there was a very good reason why the potter's craft should become exceptionally demoralized, and also why it should fall under the influence of other crafts as it recovered.[9a] Pot-making is a sedentary art, for it depends on the discovery and seasonal winning of pot-clays. A potter out of a clay-pit is out of a job. And his wares are sedentary; among people on the move, boxes, baskets, and bags are preferred, for they are lighter and less brittle. On the other hand, few points about the geometric style in the Ægean are more obvious than the clumsiness of its vase forms, the resemblances to woodwork and basketry, the prevalence of textile elements in the designs,—chequers, double-outline, "herring-bone," "blanket-stitch," and other binding-patterns. Engraved metal-work, too, which has a necessarily linear style, and distinguishes subject from background with shading or cross-hatching, betrays itself in the general use of linear fillings in place of solid brushwork: and conversely the revival of brushwork is the sure signal that the Hellenic potter is again master of his craft.

It is a further question, and much more difficult to answer, how much should be attributed in this connection to the traditional tastes of the conquerors. Here the difficulty is increased by the uncertainty whether this or that body of intruders brought their own women with them; for it has already been noted (p. 242) that in simple societies pot-making is usually women's work; though in India, for example, where the cross-division of caste has to be taken into account, the potters are men, and also of very low

social standing. On the other hand it must be remembered that when pottery is wheel-made, it seems to become "men's work," like many other mechanized crafts.[10]

Now in Greece, the "divine-born" adventurers did not bring their women with them, but married into prominent families in the districts which they occupied. Their arts and crafts, therefore,—at all events those unconnected with war,—presumably had as little local influence as their language. The "children of Deucalion" too, though they are described as spreading in tribal groups, and also as intermarrying, came from regions which in the fourteenth century were dominated either by "smear-ware" or gradually by the "gray-ware," its local successor, and consequently had no traditions of their own about pot-painting. This accords with the archaeological record, for in Ætolia, Elis, and Leucas, all that can be made out is a gradual spread of better fabrics, akin to "gray-ware," among backward "smear-ware" cultures. Even at Mycenae, Tiryns, and Argos, a good deal of coarse "smear-ware" persisted alongside the degenerate Mycenaean.

Characteristic of Mycenaean degeneration, as we have seen already (p. 470), is the tendency to form local schools, inevitable as soon as the sea ways became unsafe. In Cyprus the "free-field" tradition was preserved longest and purest, especially in a class of large deep mixing-bowls, the wide body zone of which carries chariot scenes, charging bulls, water birds, and abstract spiral designs. The well-known "Warrior-vase" from Mycenae is of the same form, but not of Cypriote clay or workmanship.[11] In Rhodes, too, though better conserved, the local fabric lapsed into a luxury of overloaded detail, in which the influence of an embroidery style is betrayed by double outlines and rotund cushion-like masses.[12] What is notable here is the clear intention to cover the surface with closely packed designs, at some cost to the grace and conciseness of the vase-form itself.

On the other hand, a widespread fabric, common in Philistia, common also in Macedon, and represented at Hissarlik—to name only distant sites,—utilizes a popular design, the octopus with outspread tentacles, in such a way that the upright body of the creature dissects the zone which it occupies into two panels, which are sometimes occupied with other ornaments.[13] The so-called "corkscrew"[14] ornament (fig. 17.b), derived from a triton-shell, is used even more emphatically to break up the principal zone into compartments. And, in addition, quite abstract barriers or frames are employed for the same purpose. All these are signals of despair, however unconscious. The artist has found the "free-field," even of a body-zone limited above and below, to be beyond his competence to decorate; and he has dissected it into more manageable areas.

Ægean Origin of the Greek Geometrical Style

Now the peculiar difficulty, in interpreting the Greek geometrical style, results from the fact that the degeneration of Mycenaean decoration in "free-field" or "zone" had reached this stage at a time—fairly accurately dated by the Philistine settlements in Palestine after 1194—when the wide region of the composite Macedonian culture, already described, was on the point of being devastated and replaced momentarily by people who made grooved pottery without any painting at all. That the invaders passed on into Thessaly is clear from a small but well-defined class of Thessalian graves. But that they produced no similar effects farther south is also clear; that their devastation of Macedon was momentary is proved by the reoccupation of the wrecked sites by a culture mainly continuous with the old. In most parts of Greece, indeed, the characteristic fabrics of pottery throughout the Early Iron Age are painted with the same materials and in the same technique as before. They are however decorated in a very different style, and on

quite different principles; and these principles become more explicit as the technical proficiency of the craftsmen revives. The conclusion seems unavoidable, that the makers of the pottery were the same people or their direct descendants, but that something happened to create a fresh and irresistible demand for pottery of a quite different appearance and aesthetic appeal. The problem then is, in our present state of knowledge, to discover the source of this compulsion. For it is clearly not the result of contact with any known style of pottery, painted or unpainted, within the Ægean, such as we have been able to detect more than once at other periods of transition.

It is not therefore necessary to seek outside the Ægean for any proto-geometric style; still less to make comparisons between the geometrically painted pottery of the Ægean, and any of the numerous fabrics of incised pottery which Central Europe had developed in earlier periods; least of all to do so in future, seeing that the only fresh people who entered the Ægean basin during the period under review, brought in, not an incised, nor a geometrically decorated pottery at all, but the modeled and grooved pottery of the Macedonian "burnt layers" and the "seventh city" at Hissarlik; and even this, as we have just seen, did not penetrate far beyond these points.

Several incidents in the later development of the Greek geometrical style may now be cleared up. First, its employment of the concentric circle is as clearly an afterthought and enhancement, as is its use of birds or horses, or oriental symbols eventually. And for the concentric-circle ornament we have a fairly coherent ancestry; for at Halos and other sites of the same date it occurs, not as an enhancement of a panel style, but as the principal and almost sole decoration of a distinct school of pottery, with a geographical distribution which, though it is probably not yet fully known, at all events cannot be of less extent than is already recorded. In

peninsular Greece, the vessels—usually but not always two-handled bowls with concentric circles (or semicircles, for the design is often too big for the frame)—occur sporadically as far south as Argolis, and in an early layer at the Orthia sanctuary. But though this fabric was imported rarely and early into Cyprus, with similar bowls bearing geometrical panels, and though the latter were even imitated there, their effect was transitory; it was not from this source that Cyprus obtained the concentric circles which eventually dominated its pot-painting.

Without pressing regional distribution further than is discreet, in view of the present short and sparse list of localities, it looks as if this concentric-circle tradition had its main vogue in the North Ægean; as if its impact on the region south of the island-chain was mainly "down-wind" and casual; and as if consequently the adoption of concentric circles into the repertory of insular schools was literally a windfall, and anticipated the general resumption of intercourse. Early sites in Euboea and Andros are the most likely to decide this point. When we read of "Thracian" settlements in Naxos and other parts of the island-world, of "Pelasgians from Lemnos" in Attica, and of "Minyans" from the same quarter settling in Laconia, we have historical parallels at hand, in Albanian place names, and villages named from Slavs and Bulgarians, in western Crete, to illustrate these sporadic landings upon the lee-shores of an archipelago.

Secondly, it has been repeatedly asserted that the geometrical style in Greece was either the creation of the Dorian conquerors, or part of their ancestral heritage "somewhere in Europe," before they "migrated from the north" into Greece. As analogies for such redistribution or "migration" of elements of culture, have been adduced the bronze horses and ducks (p. 506) and the spectacle-fibulae characteristic of Dorian Sparta. To meet the objection that

not only geometrical pot-painting, but any pot-painting at all, is exceedingly rare, local, and insecurely dated in southeastern Europe and the Danubian region, it has been argued that as linear *incised* ornaments are common there at many periods, it is only necessary to suppose that conquerors habituated to such ornament compelled conquered potters, accustomed to pot-painting, to paint such ornaments on pottery to satisfy their new masters' taste. But it is not explained, why the new masters, if they were really so particular about the decoration of their pots, did not have them done "just right," as the "gray-ware" people did, in a self-colored ware without any painting at all.

To put the matter in a nutshell, there is neither any longer reason—in view of the new evidence about the Lausitz invasion—for believing that Dorian-speaking or West-Greek-speaking tribes came from Central Europe at all; but, even if they did, they could not have brought thence the Greek geometrical style; first, because it was not there to bring; secondly, because it did not appear in peninsular Greece for some while after the only inroad of which we have archaeological evidence. This last point needs closer discussion.

The Geographical Distribution of Geometrical Style in Greek Lands, as Evidence for Origin and Date

Once again, as with the fibulae, let us "look to the end," at Spartan pottery from the Orthia sanctuary. Here the characteristic fabric in the earlier layers has the Minoan inheritance of broad and narrow bands; zone ornament has been reduced to narrow dimensions with monotonous recurrence of a very few small simple elements, mostly linear and angular. Later the concentric circle is frequent; principal and subordinate zones are often dissected into panels; the panels are separated by compact massive frames, ornamented geometrically like the horizontal zones, and even

these panels are subdivided into subsidiary zones till they are small enough to be filled by a single "concentric-circle" or other geometrical ornament. Quite elaborate maeander-ornaments are used, but like other large patterns they are never of solid paint, but drawn in outline and filled in with linear "shading," like the patterns of an engraver.

Within this geometrical repertory, however, two incongruities are conspicuous. One is the use of birds and horses as a panel filling, conventionally, almost geometrically rendered, but nevertheless recognizably derived from deliberate representations, like the votive bronze birds and horses in the same sanctuary.[15] The other incongruity is the frequent use, already noted, of concentric circles, both to fill a narrow zone, and with tangent connections to simulate a spiral effect; more rarely, of mechanical circles, on a larger scale drawn singly but center-pointed like the concentric groups, to fill panels and receive internal enhancements—lattice triangles, Maltese cross, wavy, zigzag, or dotted lines, and so forth.[16]

But this "geometrical" style of pot-painting is not at all peculiar to "Dorian" Sparta, any more than it is primary within the stratified Orthia deposit. Similar decoration is found lower down the Eurotas valley at Amyclae, which had been the Minoan center of Laconia, as the Vaphio "beehive" tomb shows, and was traditionally the chief stronghold of the older population, only conquered by "Dorian" Sparta about 800 B.C.[17] No precise date is assignable yet to this pottery, for Amyclae was reoccupied by the conquerors. But though the vases with a principal zone clumsily decorated with *genre* scenes may perhaps be later than the conquest, the style itself, with its strong reminiscence of basketry both in forms and in ornament,[18] certainly goes back to the same sources as the later Spartan; and moreover shows that there had been a distinct phase at which there was the intention to conserve or create a

principal zone among the surface-dissecting bands, but nevertheless nothing but geometrical ornaments with which to occupy it. This is an important point, for it is yet another illustration of that crisis in the growth of a style, to which attention has already been directed more than once, at which components of the decorative repertory of some other craft have been apprehended by the pot-painter as independent subjects for his skill, and given substantive value.

Now a style which is equally represented in Dorian Sparta and at Amyclae, and is a subsequent development at Sparta, cannot be the peculiar and ancestral style of the Dorian invaders; and this becomes clearer still, when account is taken of the geographical distribution of the geometric style outside Laconia. Let us begin at the outskirts and work inward, toward what we may hope to identify as the center of this new decorative technique.

Occasional examples of "geometric" vases are found in Early Iron-Age tombs in Sicily, and in Italy as far north as Etruria. Some of these are of Ægean fabrics, attributable to particular areas, such as the Argive and Saronic gulfs; but the majority are of local clay and workmanship, and result therefore from intercourse more intimate and extensive than could be inferred from the imported examples alone. If this intercourse be attributed solely to Greek colonies founded at the end of the eighth century, they are relegated to a period so late that the preceding three or four centuries would be argued to have made, not only no progress, but almost no pots. The alternative is to forego this gratuitous restriction of date, and conclude that exploration and trade preceded formal settlements, and that these fabrics of pottery, like the types of fibulae which accompany them, are to be dated in accordance with their Ægean models, not vice versa. But whatever their date, their Ægean origin is certain; it is not west of the Adriatic that the home of the Greek geometrical style is to be sought.

This is the more instructive, because side by side with these Ægean models and their local imitations, there are several well marked schools of geometrically painted pottery in Sicily and South Italy; some going back to a far earlier tradition of pot-painting (p. 242); others originating quite as abruptly, and also quite as late, as the geometrical style in the Ægean; but exhibiting no trace of initial dependence on it, and only occasional loans from it at a relatively mature stage in their own development.[19] Any explanation of the Ægean style must clearly take account of these contemporary styles in adjacent areas to the west.

Eastward, the situation is similar. Occasionally, vases of Ægean geometrical style—even masterpieces of Attic fabric[20]—were traded to Cyprus at phases of the local culture which can be approximately dated. They were imitated, but so seldom that they set no fashion; for Cyprus had a quite distinct style of its own, geometrical in the general sense, but combining elements which it has in common with Ægean geometrical schools—the broad-and-narrow banding, lattice triangle, wavy line, and above all, the concentric circle—in quite other proportions, and into very different schemes, mainly resulting from its early and emphatic adoption of panel composition, a peculiarity which must be examined later (p. 485).

This Cypriote geometrical style has its counterpart in the local fabrics of Phoenicia, Syria, and as far afield as Carchemish, though with repertory less abundant and varied, fewer Ægean elements, and more emphatic dissection of zones into panels. But as Cypriote imports in this mainland culture are as rare, and also as uninfluential, as Ægean imports in Cyprus, it appears that the mainland style is at home here, not a copy from that of Cyprus; and consequently that Cyprus acquired its predilection for panel work, in part at least, from the mainland.

The sources of this Syrian style are only recognizable in outline as yet. On the one hand it inherits a very ancient tradition of pot-painting from the culture of Susa and Moussian in the highlands of Elam beyond Tigris, which is represented as far south as Palestine, and as far west as Cappadocia, though it never reached Hissarlik. On the other, it is indebted, like Cyprus itself, to the derivative but magnificent "black-on-white" and "tricolor" fabrics of Cappadocia,[21] the dates of which cannot yet be determined directly. Their influence on the fabrics of Cyprus begins, however, during the Minoan colonization early in the fourteenth century and is again potent after the collapse of that movement at the end of the thirteenth.[22] As the upward date is only that of the first Late Minoan intercourse with Cilicia and North Syria, it is obviously only a "lowest possible" for the maturity of Cappadocian pot-painting; but it is high enough to associate the "white-slip-ware" of Cyprus with the Hatti régime; though not to the exclusion of the acceptance and renewed spread of an established Cappadocian style by the Muski people, who reoccupied Carchemish, and influenced Cyprus also profoundly after the Land-raids.[23]

Conspicuous among the novelties introduced into Cyprus at this later period, are the concentric circle, and concentric pothook—already discussed in another context (p. 455), the numerous schemes of lozenges and triangles resulting from the dissection of zones or panels by diagonal lines, and the enhancement of these schemes by counterchanging the colors of adjacent compartments.[24] The last-named is notable as yet another example of the employment of the components of one kind of decoration as substantive designs in another style; for lattice work and counterchange inevitably occur in all sorts of basketry and textiles, and in decoration derived from them. All these elements, however, are subordinated to the strong control of structural designs, furnished for the most part by the Minoan scheme of rhythmic broad-and-

narrow zones and bands, but supplemented by the employment of transverse frames to dissect principal zones into panels, in the fashion long familiar in the painted pottery of Palestine and Syria, and inherited in these regions from the ancient technique of Susa. Having thus identified the dominant and structural elements in this composite style, we may postpone discussion of its eventual repertory of enhancement; noting however that we can only expect to throw light on the origins of these subsidiary ornaments if we can ascertain their geographical distribution; and only then, if this light is sufficient to enable us to discern the direction from which they spread.

Within the marginal range, then, of examples exported to Sicily and to Cyprus, and south of the Thessalian and Macedonian region dominated by the concentric-circle tradition, the home district of the Ægean style must lie. Can we define its early range more closely? In Rhodes, all three principal sites have been partially explored. Ialysus, in the northeast, and nearest to the mainland, had its great period in Late Minoan times, but lasted long enough to develop a peculiar local style, even more crowded with conventional birds and foliage than the contemporary mixing-bowls in Cyprus.[25] Lindus, on the east coast, takes up the story in the Early Iron Age, with a culture in which influences from the Ægean and from Cyprus are balanced, as the fibulae show; and the decorative art is a similar compromise. Components from the repertory of each adjacent area recur as substantive designs, but they are handled with little constructive ambition. At Camirus, on the other hand, looking out westward into the island-world, there is an elaborate school of geometrical design, in which concentric circles and lozenge patterns, together with maeanders, birds, horses, and occasionally human figures, are utilized as enhancements of complicated panel schemes, all dominated and enframed by the Minoan rhythmic bands. It owes nothing

specifically to Cyprus, has no preliminaries in Rhodes itself, and has every appearance of having been introduced already fairly mature from some other part of the Ægean. Thus the contrast between the Early Iron-Age tastes of the east and west coast of the island is great; hardly greater, however, than the differences between each of these local schools and that of Argos, whence both Lindus and Camirus are traditionally "Dorian" colonies. Clearly we are dealing with techniques and artistic outlooks which depend on other factors besides the presence of Dorian settlers. But though the taste of Camirus differs from that of Argos itself, if we may judge from the dedicated pottery from the Heraeum, it rather closely resembles that of non-Dorian and pre-Dorian Tiryns. For there was in fact a well defined school of geometric art in Argolis, as in Laconia, the peculiarities of which are reflected by other insular styles as well as in Rhodes.[26] Emigrants could be Argive without being Dorian.

In Crete, another principal area of Dorian settlements—Argive in the center and east, Laconian in the west—there is even greater diversity. Cnossus has a rich combination of concentric circles, lozenges, and other simple elements, dominated by a zone structure more like that of Cyprus than of any part of the Ægean, and akin to Cyprus also in the very free use of red pigment as well as black[27]—an enhancement which has a curiously discontinuous distribution, though there seems no reason to doubt that its origin is in Asia Minor, and that its spread into Mediterranean coast-lands results from intercourse with some district or other of that mainland. The Cretan city Arcadia, on the other hand, passes, almost without geometrical interlude, from very belated Mycenaean to early Hellenic decoration like that of Ægina and the "proto-Corinthian" schools.[28] Oaxos and some smaller sites have skeuomorphic styles remoniscent of basketry, gradual degeneration from "sub-Mycenaean" into panel decoration, concentric circles, and

so forth.[29] No site hitherto examined is characterized either by the Spartan or by the Argive variety of "geometrical" art; yet most of the Cretan cities of classical times professed to be either Argive or Laconian colonies; and Praesus, which boasted itself to have survived from "the days of King Minos," has, on the other hand, a local style much akin to geometric art in the island-world.

In Thera, which received its Spartan colony about the same time as the west of Crete, there is again a local style, sometimes lightly and even gracefully handled, with complete avoidance of broad bands or solid surfaces of black paint; strongly contrasted therefore with that of Camirus and of the Cretan Oaxos, which revel in wide black zones, interrupted only by heavily decorated panels.[30] Yet Thera too received at one phase, and imitated for a while, the gloomier close-wrought style of Argive Tiryns, eventually one of the most elaborate of geometrical schools.

Enough has been said, in regard to the geometrical styles of the South Ægean, to prepare for what would be the supreme anomaly if these styles were in any sense "Dorian"—namely, the great schools of geometrical art in Attica and Boeotia, and the evidence that Euboea too had passed through a similar phase, though the pottery from Eretria, so far as it is known at present, has hardly begun before geometric design breaks up under the influence of Asiatic Ionia.[31]

Development of Geometrical Styles within and around the Ægean

Until there has been far more detailed investigation of large cemeteries of this period, and, above all, of stratified sites, much that has been written about the history of the geometrical style is necessarily provisional, because it rests primarily on morphological comparisons, not on proof of sequences. It is however already safe to distinguish a first

stage when the concentric circle spread rapidly in competition with the meager survivals of Late Mycenaean decoration—lattice triangles, dotted circles, wavy lines—; temporarily superseded them in North and Central Greece, and in parts of the island-world; penetrated far into Asia Minor; and probably reached Cyprus rather by this route than oversea, though very rarely Ægean vases of the concentric-circle school did reach Cypriote ports.

It will be seen that in this stage the continental domain of the concentric circle closely corresponds with that of the symmetrical "Asiatic" fibulae, which, as we have seen, reached Cyprus overland, though not so early as the stilted fibulae from the south Ægean, nor with such lasting effect. The Ægean domain, likewise, within which the concentric circle, though present, is a stranger in a strange land, corresponds approximately with that of the "unsymmetrical" fibulae with stilt or catch-plate.

Secondly, corresponding with the long interval when these two types of fibulae were insulated from each other, we have detected a second phase when decorative design fell apart for a long while into an eastern and a western school. East of the Ægean, Cappadocian and Syrian decoration, reinforced by the concentric circle, but otherwise not much modified, remained a fairly simple affair of loosely constructed panel designs, or mere zones, or elementary combinations of these.

Thirdly, in the southern Ægean, and specifically within the region of the catch-plate fibulae, local schools of pot-painting, as of safety pins, arose, in Rhodes, Crete, Thera, Laconia, Argolis, Attica, and Boeotia, wherein various simple rectilinear ornaments were employed to fill the spaces between the wheel-painted bands inherited from Minoan technique; sometimes, and especially at first, to the exclusion of concentric circles, but elsewhere combined with them. Two main extremes of taste are represented by the "light" styles of Sparta, Thera, and parts of Argolis, which discard solid

black for pure line-work, and the "dark" fashions at Tiryns, at Camirus, and in some parts of Crete, which tended to obliterate the traditional band-work with solid black, and to reserve at most a principal zone or panel for geometric ornament. In Attica and Boeotia, after long apprenticeship in the "dark" school, a more balanced type of composition prevailed, in which some account was taken—though for a long while not much—of the contrast in value between solid black silhouette on a clear ground, and the half-tone effect of chequered or latticed ornaments; a refinement which east of the Ægean—in Cyprus, that is, and eventually in Ionia—was achieved by the use of red paint, a Cappadocian fashion probably of old standing.

Fourthly—and this is where relative dates are most obscure at present—there was a stage in the development of almost all Ægean schools, at which the customary division of the vase surface into continuous horizontal zones found itself in competition with the transverse dissection of zones into panels, the subordination of lateral panels to central, and eventually the subdivision of panels into upper and lower tiers, to enhance the coherence of what we may by this time describe as the "composition" or "structure" as a whole. In Argolis and Attica, sometimes, the central panel is alternately restricted upwards and laterally; as though several structural adjustments were required to "get it just right."[32] While it is admitted that, in Cyprus, panel design had been in use almost from the close of the Mycenaean régime, and in Syria and Palestine long before that,[33] the suggestion that panel design in Ægean schools resulted from renewed intercourse with Cyprus assumes that all Ægean panel designs are comparatively late, discounts the existence of elaborate panel composition in Cappadocia and also in Caria—though the dates of these, too, are uncertain—and assumes total break of continuity, after those Mycenaean experiments in panel structure for which evidence has been cited already (p. 473).

Alternative interpretations assign on the one hand greater significance to the northwestern tradition revealed at Lianokladhi and Boubousta (p. 459) in view of the Greek belief that the Dorian invaders came from that quarter—though this, as we have seen, does not accord with the data from the Dorian districts farther south—and to the later occurrence of transverse subdivision in the geometrical schools of Sparta and Argolis, though this is not demonstrably "Dorian" nor actually primitive in them. On the other, fuller account may have to be taken eventually of such masterpieces of rectangular design as the façade of the "tomb of Midas" in Phrygia. Judgment is therefore reserved for the moment, as to the source of Ægean fret patterns and maeanders (which presume expert subdivision of a field in two dimensions at once) until more is known of the decorative arts of the west of Asia Minor, and also about the relative date of those geometrical schools, west of the Adriatic (p. 479), which combine concentric-circle ornament with panel design in a way which it is difficult to attribute wholly to such intercourse with Cyprus as may reasonably be admitted to account for Ægean developments.

Much allowance, certainly, has to be made for local differences in the rate of development, and in the respective influence of the varied components and factors. But that is just what makes the gradual coalescence of the geometrical styles so instructive. Hardly anywhere else, except perhaps in early schools of medieval painting, and nowhere with such wealth of individual achievement, is it possible to watch the art of a great people awakening to consciousness, first, of its manifold resources and then of its own command over them.[34]

Such coalescence was the more possible, by reason of the general uniformity of conditions, at all events outside the districts actually occupied and dominated by the last newcomers; and even here, so far as industrial conditions went, some essentials were the same as elsewhere.

The Social Background of the Geometric Styles

In discussing the Greek observance of hero-cults, we were led to the conclusion that at a stage subsequent to the Minoan Age—for the ceremonies are derived from Minoan observance—but earlier than the establishment of oversea colonies,—because outside the "old country" such hero-cults are almost confined to founders of new settlements, fully historical personages—Ægean society suffered a profound general shock. Existing régimes and institutions collapsed in most places, and there was much emigration, especially from districts conquered by newcomers, many of whom were themselves displaced already. If this was so,—and Greek folk-memory is full of the details of it—we ought, first, to find the material arts' relapse from, and reaction against, the tastes and habits of those who had maintained the market for the higher art-works of the *ancien régime*. Next, if the new masters were as incapable of directing industries as of imposing cultured tastes of their own, we should expect to find proletarian recrudescence of older techniques and styles, never wholly extinct among the populace and, on the country side, among the craftsmen, but now released by prevalent loss of confidence in traditional "upper-class" tastes, methods, and repertory. And, then, as new styles, concordant with the new order, emerged from this chaos and nihilism, we should find competitive solutions of the practical question—how to make goods that would sell.[35]

And this is just what we have been discovering. In particular, during the worst stress of dislocation, it was safer, as well as easier, to make pottery without detailed ornament at all. Short of pleasing all, it could at least not displease many. That was an immediate radical iconoclasm; but like other policies of despair and negation, it opened the way for its opposite. For as things settled themselves and intercourse was renewed, craftsmen wandered, as well as their wares.[36]

Technique became standardized by exchange of experience; repertory was expanded by mutual imitation, and the broader experience of customers. In particular, adventurers, trader and pirate alike, brought back strange and striking curios from afar, "cargoes Egyptian and Assyrian," as Herodotus puts it; engraved bowls from Cyprus and the Phoenician cities, glazed ware and scarabs, tales and samples of gorgeous oriental polychrome, "Babylonitish garments" such as made Achan to sin at Jericho, "Smyrna rugs" from up-country looms in Asia Minor.

Some schools of design fell into this eclectic snare. The so-called "Rhodian" jugs and plates, charming as they sometimes are, failed to assimilate all this *chinoiserie* and shared the fate of our own "willow pattern." And the main reason was that, like other "Ionian" styles,—so far as we know at present—they remained dominated by zone composition such as had prevailed when Ionia was colonized, and consequently had no structural principle competent to co-ordinate the new surfeit of designs. That they were also nearer to oriental centers of frieze decoration, and in frequent communication with them, may excuse (but does not explain), their failure to do what Athens and Argolis, and even Eretria did; namely, to dissolve the pageantry of the friezes into its elements, and among these to select fit subjects for panel decoration, the lions of the "Burgon-vase," the sphinxes of Eretria, the solitary cocks on Corinthian and early Attic vases.[37] But how nearly even those "Ionian" painters came to this, is seen when they were confronted with a space which was not a zone but the circular bottom of a plate.[38]

The same fate befell those even more eclectic styles which prevailed in the region of the catch-plate fibulae, and reached their highest development in the scenic vases of Melos. Here a more tectonic scheme was attained, under influences immediately Argive, but related to Attic, as we have seen; and it is notable that success in the handling of pictorial subjects

directly followed upon the facilities which two-dimension structure gave, for providing a central panel large enough for the purpose. This progress can indeed be better followed in Melos even than in Attica.

The Corinthian and Ionian Alternatives to Geometric Style

This is the point at which to take account, however briefly, of that other school of decorative art, so closely related in origin, so divergent in its development, so tragically confronted eventually,—the "proto-Corinthian" style, and its Corinthian and other descendants. Fuller discussion must be left to others, but the cardinal considerations are these. Though no doubt in its motherland larger and more ambitious work was attempted than the miniature vessels which were so widely traded, and form so large a proportion of the known output, the peculiarities of proto-Corinthian *aryballi* and *lecythi* give important clues as to the circumstances of their manufacture. Their body-forms are directly derived from Late Mycenaean types; but they have substituted for the Mycenaean "false neck" and "stirrup handle" the flat rim and string-hole handle of the Egyptian *alabastron*, the "alabaster box of very precious ointment," which was the scent-bottle and medicine-bottle of all antiquity, that is to say the dispensing unit of the oriental druggist. Whenever the dispensary of balms and ointments was in the ports of the Levant, these rarities were shipped overseas "in bottle." But whenever the western world had its own wholesale importers—like the "grocers" of medieval England—bottle-factories sprang up at the dispensary door, making "false-necked" drop-bottles in Mycenaean times, flat-rimmed "false-alabastra" in the proto-Corinthian revival.

Now the geographical distribution of "proto-Corinthian" vases challenges the description of "proto-Corinthian" style as an Ægean style in the strict sense of the phrase. Wher-

ever these bottle-factories were, they were working primarily for the western trade; and there is little doubt that they represent the dispensary side of that wholesale-and-retail establishment which grew up on the Corinthian Isthmus as the direct result of the rediscovery and exploitation of the trans-Adriatic West. Whatever the date of the earliest extant examples, their decoration is eloquent of direct descent from that phase of austere abstention from all but the simplest rhythm of broad and narrow bands, common to early Ionia, early Attica, and early Sparta: and it is soon linked, technically as well as geographically, with its southern neighbors at Argos[39] by marked preference for schemes of many very fine bands,—a "trill" or "tremolo" effect, the mandolin, not the castanet, of the ceramic "jazz" band. Italian copies of much larger vessels give glimpses of designs not unlike those of Cretan and Cypriote schools; and the repertory of enhancement in the bizarre native schools of South Italian painted ware (p. 479) helps to fill out our conception of west-bound cargoes from what may be discreetly characterized as "Isthmian" workshops.[40]

In the miniature style, which is all that we directly know, there was not much room for enhancement even of the solitary shoulder-zone; but the choice of designs was clearly the same as elsewhere; and the same also is the sequence of vogues. The dotted circle and lattice-triangle are Minoan souvenirs; concentric circles and pot-hooks tell their own tale; "wave-coil" and "dog-tooth" are discreet experiments in counterchange, identical in principle with those of adjacent Attica; friezes of birds and armed men are as near as miniature art could go to the pageantry of the Dipylon school; and the "hare-and-hound" designs on the little *lecythi*, with the horses and fish on Italian imitations, betray the same preference for humanist *genre* as the ducks, fish, and tethered horses of Ægean panel-work. When the moment came for choice between the zone design of Ionia, and the two-dimen-

sion structures of Attica, Argolis, and the islands, current trade connections made easy what inherited technique prescribed. The result was a revolution and a catastrophe, with the red paint, scratched details, and blurred rosette-fillings of "orientalizing" Corinthian work; the mandolin gave place to the big drum and colorful saxophone.

Characteristic of both Ionian and Insular styles, and also of this Corinthian series—which would require a chapter to develop its full significance,—is the growing reliance of the artists on the supplementary use of red and white pigments. These, as has been long recognized, came first into use, in these schools, after the immemorial practice of filling outlines with linear shading or cross-hatching had been given a new significance as a "half-tone" intermediate between light and dark. The use of "half-tone" at all was a profoundly important departure from the principle of "abstract" design, and a concession to alternative practices of "representative" or "pictorial" decoration. There had indeed been a stage when, in common with the bronze-engravers, even Attic pot-painters had employed it; but with the revival of brushwork, and the employment of this on more and more ambitious experiments in silhouette, "half-tone" was relegated to minor decorative details (maeander, lozenge, etc.) and to mere zones and panel frames. But in Boeotia and Euboea to the north, in the islands and Ionia, and also in the Corinthian schools, so deeply indebted to Ionia for the new pageantry which fills their zone designs, red, and occasionally white also, came into frequent use. In the Cnossian school of purely geometric ornament, red even changes place with black; but this was a local experiment.[41]

Now an immemorial home of three-color decoration, as has been already noted (p. 480), was apparently in Central Asia Minor, whence the Greeks of classical times themselves obtained their standard red pigment, *miltos*, and whence also spread the practice of deliberately whitening the vase

surface, in order to give full value to the interplay of red and black.[42] In Cyprus and Syria the coming of the new fashion can be traced more easily, though the Cilician link is still missing. In the Ægean, the missing link is once more in Ionia; but the striking use of "tricolor" on the vase from Idrias in Caria (p. 502), and on architectural terra cotta from Sardis, partly supplies it.[43]

A "pictorial" style, however, the technical resources of which were limited to black and white and half-tone, fell between two stools; it sacrificed the "abstraction" and austerity of monochrome, without satisfying the claims of pictorial art to represent nature's color scheme. Under Corinthian and what is provisionally called "Chalcidian" tutelage, Attica made brief excursion on this blind road, and retrieved itself; achieved (at the culmination of its own "red-figure" technique) the splendid pathetic experiment of the "white ground" vases; and drew back again. But the island schools, like those of the Asiatic cities, and any others which catered like Corinth for the western market, faded out, less because their polychrome was infantile than because to rely on pictorial technique at all was to distract their attention from the profounder problem of composition.

Once again, in regard to these experiments in polychrome technique and pictorial design, the same contrast emerges, as has been already detected in other respects, between the course of events east and west of the Ægean; the frontier, however, lying obliquely across the archipelago, north of Euboea, but south of Caria. It is an ancient demarcation, for we have encountered it already in the range of Minoan enterprises, in the political geography of the Trojan War, and in the distribution of the fibulae. What is new in this instance is that the foreshores of the great land-masses to north and east of the Ægean were now occupied essentially by Greek cities, and the gaps were slowly but persistently being filled by more cities, as opportunity came. Periclean

Athens found only the "Thraceward parts" available for its surplus population, and had to reconnoitre the north coast of Asia Minor, beyond the Bosporus; and Miletus, even here, had nearly three centuries' start.

The Special Predicament of Attica and its Neighbors

In this new partition, no longer now between Ægean and continental, but between southwestern and northeastern Greek—for this is the geographical, and consequently the cultural, significance of the cleft between Ionian and Dorian which rises to supreme significance eventually,—the part which had been played in a previous cycle of events by "golden Mycenae" fell like Benjamin's portion to that state which politically found its "place in the sun" last of all; namely, Athens—or rather the united states of Attica.

Local folk-memory did well to accord supreme hero-worship to Theseus, the creator of that union in face of the "divine-born" dynasties, and to honor the name of Codrus, less for stemming the tide of invasion than because, a "Neleid from Pylos" himself, he stood for that conception of Attica as a rallying ground of all that was yet sound in the old countries, and was to be so prolific of soundness in Miletus and Ephesus, safe Neleid refuge oversea, and in Pisistratus, the Neleid creator of the receptive Attica of the sixth century. For this new factor in the making of a Greek people, the central citadel of what was continuous with the old, had, in relation to all that was new, the same pivotal situation as the British Isles have occupied in modern civilization, at one extremity of that axial line which divides peninsular Europe from Calais to Venice, and through Venice to Constantinople, into a Romanized and an un-Romanized, a maritime and a continental (or at best a land-locked) half. Southward, Attica looks out over the Saronic gulf into anciently Ionian country in northeastern Pelopon-

nese, and down into the island-world, and away beyond Rhodes and the "Swallow Islands" into the Levant and the Nile mouths. Eastward, both Euboean channels emerge in island-strewn avenues, by Andros, Delos, and Samos into Ionia, by Scyros to the Chalcidice and the Straits, with the Great Lakes beyond and the Scythian Manitoba and "Middle East." What Sardis became, through the financial instrument of its gold field, between the coastwise and island wise traffic of Ionian cities, and the long caravan routes to the old "birthplace of silver," the new steel works of the Chalybes, the ruddle quarries of "Cappadocian earth," and the "Cilician gates" opening on the Greater East;—all this, Athens, with its home wealth of silver, its marble and potclays, its charcoal burnings in the "black country" round Acharnae; its pedigree olive trees—Athena's own gift— and (above all) its miraculous draught of humanity, "gathering of every kind" from the old world, and now from the new countries oversea,—was in the position, and had the human resources, to become, when Cleisthenes built upon the foundations of Theseus a political superstructure wherein there was indeed "room for all."

Here it was possible for every man of good will,—whether he worshiped "Achaean Demeter" or a "Carian Zeus," to "do his own work and not meddle," to "know himself" and his place among the rest, claiming "nothing too much," lest the great design be deformed.

Of the earlier history of Athens, from the colonization of Ionia almost to Solon's time, we hear very little from literary sources; and clearly the later writers did not always understand the fragments of tradition that they transmitted. All the more significant, therefore, is the fact of the great Dipylon cemetery, with its masterpieces of potter's technique, vases tall as their makers, painted at the climax of the geometric style; preceded by a long sequence of experimental work, in graves at Eleusis, and on the west

slope of the Acropolis; and followed by the vases of Phalerum on the coast, where new oversea notions caught people's fancy earliest, and were introduced slowly and diffidently into the strict old style, some already transfigured in island workshops, others more directly studied on metal bowls from Cyprus or shields such as adorned the Idaean Cave in Crete.[44]

At the latter end of this long series the transition to "black-figured" technique may be followed in detail. The beginning however, is not so well known, and still less the conditions which favored the spread of the nascent style into neighboring regions occupied permanently by invaders. On this point Tanagra and Megara should have information in store. We begin to need, not more digging, so much as digging better directed, to solve specific problems such as this. In Argolis, the long-standing friendship between Attica and Epidaurus, Troezen, Hermione, and other partly Dorian states, suggests that, as things settled down, craftsmen temporarily domiciled in Attica slipped quietly back again and resumed their home business with something of "Attic salt" in their skill. Here Tiryns, and Asine still more, have begun to yield valuable evidence, because each is typical of a class.

Characteristics of Mature Geometric Style in Attica

Quite characteristic of the geometric style, on the Greek mainland, and most of all in Attica and its neighborhood, is the complete dissociation of the few surviving ornaments from any meaning they may have had previously.[45] Its decoration, like that of an engraved metal strip, might be put to almost any purpose.[46] This is what is meant by describing the geometrical as an "abstract" style; and it is "abstract" also in the further sense that it takes little or no account of the shape or structural elements of the decorated object. A vase, for example, becomes a mere wheel-made vehicle for displaying a sequence of bands similarly wheel-drawn.

This is conspicuous in Attica,[47] in Laconia at the bottom layers of the Orthia sanctuary,[48] and also in the most archaic of the local pottery at Samos:[49] the last-named probably representing a phase of Attic technique which has not yet been found in Attica, but is the necessary transition from the styles of Salamis and Halos to that of the graves on the west slope of the Acropolis,[50] the earliest known phase of fully formed Attic geometrical work. In almost complete oblivion of the Mycenaean repertory—from which Samos retained nothing but the "wavy line" and the "dotted-circle" ∴ ornament[51]—these schemes of bands monopolized the field, to such a degree that in Attica it is often difficult to say whether the artist is thinking of a design in dark on light, or in light on dark.[52] We have indeed only to compare a photographic print of his handiwork with the negative from which it was made, to realize that in fact he is thinking of neither, except as factors in his design: "darkness and light to him are both alike."

From this symbolic nihilism,—responsible centuries later for the facility with which Attic artists alone made the *volte face* from "black-figured" to "red-figured" draughtsmanship for purely technical reasons,—there emerged quite early, a whole repertory of new designs, which were, and remained, purely abstract, because they never had had symbolic or any other meaning, being indeed in origin the mere background of quite different ornaments.

Here is a simple example. A zigzag or wavy line or running coil, between two dark bands, may or may not be all that is left of a spiral, a snake, or a foliage spray (fig. 18-*1.2.*A). But if this line be conceived as dividing the zone which it occupies into halves, and one of these be filled with linear shading (B), or solid black (C), a fresh pattern is arbitrarily created, "dog tooth"[53] or "wave pattern" according as the generating outline was zigzag or wavy. Out of such acci-

dents—probably also out of apprentice-blunders—as when Richard Arkwright upset his wife's spinning wheel—came these and similar patterns in several cultures, literally "from China to Peru," as well as in ancient Attica. But it was only by Attic craftsmen that their significance was appreciated, and through whom they became a joy for ever.

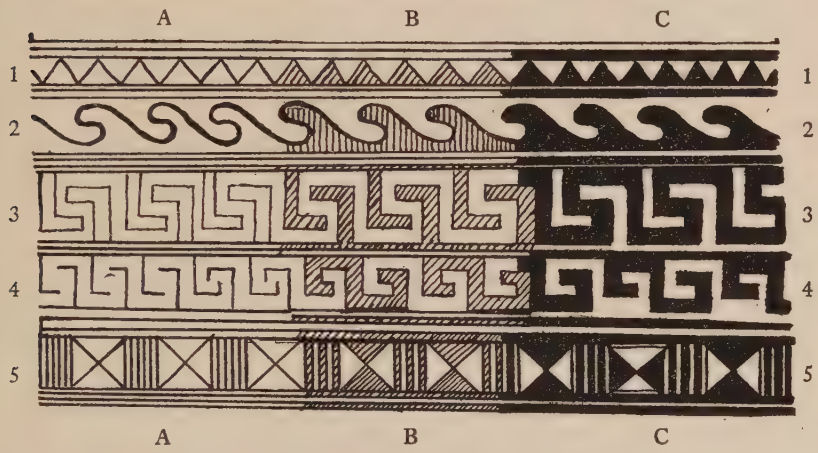

Fig. 18.—Examples of Counterchanged Design.
Illustrating their origin from linear technique and halftone.

Less obvious at first sight is the result of drawing in outline (fig. 18-*3.4.*A) the "pothook spiral" or its L-shaped angular equivalent, and repeating this on both margins of the zone. Fill in these outlines (*3*B) and the generating ornament reappears, dark-on-light; fill in the background (*3*C), and you have created a key fret, the "Grecian" ornament *par excellence*, throughout aftertime.[54] Draw now the generating outline so as to divide the zone equally, as in our first example, and fill in *either* half of the zone (*4*B.C.) and you have the prototype of all "step-fret" patterns, of which it cannot be said, any more than of the "dog tooth" or the "wave" pattern, that either the light half or the dark half *is* the design, nor that the other half *is* the ground. Similar counterchange arises (*5*A.B.C.) merely from crossed diag-

onals. The pattern in fact consists, as all such "counter-changed" patterns do, of both halves together: "being" and "not being," as later philosophers expressed it, are indissolubly combined in that which is seen by the eye and "appears to exist." Socrates did well to frequent Athenian workshops and question the craftsmen, as only a thinker could who had been a craftsman himself.

Evidently what characterizes the various manifestations of the "geometric" style is not so much tradition as an invention; it is less a technique than the expression of an outlook and an ideal. It is eclectic, in the sense that it accepted, and adapted to its own purpose, a great variety of traditional designs and a variety of technical devices. But it was able to do so without merely copying its models, because its treatment of vase surfaces, and indeed of all fields of its operation, was governed by principles of composition so explicit that it seems necessary to suppose that the artists were at least partly aware of them. In so far as this is recognizable in their work, the "geometrical" style may be characterized as the first rational and self-conscious style in the history of art. This self-conscious rationalism is obviously a quality, and a principle, which admits of many gradations. The complex masterpieces of geometric vase-painting in Rhodes, in Thera, above all in Attica, were not achieved without long practice and much experiment, not all of it successful—for example in the Boeotian and some Cretan schools. And in its beginnings it was a counsel of despair. In the Mycenaean decadence, the great traditions of Minoan naturalism, acute observation of natural objects, and graphic skill—trained eye and willing clever hand co-operating instinctively, like those of a Magdalenian cave-painter—were fading away, in an age of scramble and insecurity—"men's hearts failing them for fear, and for looking for those things which were coming on the earth." It was the failure of self-confidence and self-mastery rather than of

vision or technique, that had tolerated the restriction of free field into zones, and the dissection of zones into panels; sometimes because the sole space unoccupied by the rhythmical "jazz" of broad and narrow bands was interrupted by such utilitarian obstacles as spout and handles;[55] sometimes through the reduction of traditional designs—octopus, sea shell, flower, or foliage—to a few more or less vertical lines between which the sections of the field gaped emptily.[56]

Sometimes the solutions of this problem were queer enough. Twice, in extant examples of Late Minoan provincialism, the spreading tentacles of an octopus served to dissect an otherwise free field into compartments like those of a spider's web, and therein all manner of other creatures disport themselves.[57] Sometimes, it is a tree or other bit of landscape background that breaks up a zone into compartments, each with its own inhabitant.[58] It was easy for such a detail to lose its identity and become a mere frame or partition between right- and left-hand panels.[59] And for filling the two halves of a bisected field there were models enough, in the "heraldic pairs" of animals and other objects which had been a commonplace of Minoan design, and persisted in seal engraving throughout.[60]

To treat these accidentally resulting spaces as fields for the display of more manageable themes,[61] was at the same time the *reductio ad absurdum* of naturalism, and the first step toward the conception of an organic whole composed of mutually dependent parts. Thus, "need overtaking him," a new problem faced the artist, of achieving unity deliberately through multiplicity; of reconciling the Many with the One.

From this concentration on abstract dissection and assignment of patterned surface, results a very curious illusion, exactly complementary to that which has more than once been manifest in descriptions of Minoan vases. It is a commonplace of criticism to comment on the "heavy"

stolid appearance of "geometrical" vases, and to contrast it with the "lightness" of Minoan. It has even been stated that Mycenaean pot-clays are physically lighter than the average, and most of those who have to handle them have experienced this illusion, sometimes at some risk to the vases. In fact, however, all pot-clays are of much the same specific gravity. But the Minoan artist, intent on the representation of an object, and regarding the vase surface merely as a vehicle, produces effects so vividly akin to perspective that the design seems to be within a pellucid ethereal film which is all that separates "inside" from "outside" of the vase. All geometrical vase-painting, on the contrary, concentrates its attention on analysis of that depthless surface between the "being" of the vase and the "not being" of circumambient space. All that lies behind that surface is as negligible as what is in front of it. Hence that uncompromising stolidity of geometrical vase-forms; like contemporary sculpture they are "born of an oak or a stone." That aesthetic defect indeed was cured in time; but does it seriously matter what a "Grecian urn" contained, or whether it has an inside at all? Even Greek temples have this statuary aspect; but Greek worship, like all Greek life that mattered, went on in the open air.[62]

Geometric Schools outside Attica

Nothing quite like this earliest Attic school has been found elsewhere hitherto. At Troezen, Tiryns, and elsewhere in Argolis there are kindred styles, but at Troezen the craftsmen followed a counsel of despair, and covered almost all the surface with black paint. The same gloomy tradition is perceptible also in the geometrical art of Camirus in Rhodes, which had an Argive colony, and on some Cretan sites. At Samos the disuse of traditional ornaments was almost complete, and Samos alone of Ionian cities, so far as we know, kept its background clear of such "filling-

ornaments" as they had now come to be, until in due time it learned a "more excellent way."[63] Elsewhere in Ionia, the same fundamental notion can be detected still, though the "light" zones became the recipients first of a multitude of "filling-ornaments" from many sources, old Mycenaean, contemporary insular art, inland industries of Lydia, Caria, and beyond; and then of those processions of animals and birds no less heterogeneous, which proclaim renewed intercourse with the frieze-ridden art of Assyria and the western provinces of its empire.[64]

In the Cyclades and some parts of Crete, old Mycenaean practice died harder, and the miracle of counterchanged design never became more than an accessory. Insular maeanders at Thera for instance are usually introduced as ready-made additions to the local repertory. Like the concentric circle, and later the birds and animals, and oriental guilloche and rosette, they occupy the places of honor till they are deposed by fresh novelties; they are cut off short to fit a panel, as if stenciled from a stock piece; they are simplified, dissected, degraded into "filling-ornaments," side by side with oriental lotus and rosette, and Cypriote diagonals and lozenges.[65] But like their associates in these insular and transmarine styles, these abstractions have lost, so to speak, that absence of meaning which was their *raison d'être* originally. They are depicted as ornaments, for their quaintness or their associations, no longer as a subtle dissection of geometric space, mere interplay of light and dark.

Panel Structure in Attic and Saronic Compositions

What is not so easy to trace to its sources, is the later invasion of this earlier and essentially Attic, or (at widest) Saronic style—for it becomes almost as much at home on the Argive shore of the gulf,—by the panel composition of which it makes eventually such constructive and original use. While it is justly argued that, in Cyprus, panel composi-

tion has very early vogue, the connecting links are not clear—though Crete may eventually reveal more traces of Cypriote intercourse even than the Cnossian tombs of 1927; and the Cypriote handling of the panel scheme, with its frequent diagonal dissection, differs markedly, from Attic Argive, and Insular alike.[66] The sole extant example of Carian panel design[67] comes rather nearer, and Attic folk-memory had tales of Carian settlers. And there is always the alternative source for any tectonic device, in local woodwork and basketry. The fact, however, remains that Attic, panel design is not primitive, but subsequent and supplementary; that in Argolis it is no earlier, and in Laconia clearly later than in Attica, and that the total absence of habitual panel design in the Ionian schools makes improbable the notion that Attica received it from the heart of Asia Minor direct. There is the further objection that, though there are in Asia Minor rectilinear designs, skeuomorphic and other, in plenty, there is no trace of tectonic "geometry" more elaborate than the Cypriote sort.

But it must always be remembered that in archaeological enquiries we are only able to study those portions of a people's material equipment that have escaped destruction. In the long course of this investigation we have had to refer one peculiarity after another, in pottery styles, to the influence of other crafts and materials—gourd bottles, leather-work, basketry, embroidery—the originals of which have decayed, as well as to metal-working, of which actual examples are comparatively rare owing to the value, not the perishableness, of their material. And we have had to take into account elsewhere (p. 454) the fact that the highlands north of the Ægean were a forest region, and also that the avenues, through which Danubian intruders had to come, traverse park-land, if not actual forest. From neolithic times onward, there are occasional examples of the influence of

woodwork on pottery and other arts; and the traces of lake-dwelling communities in Macedonia—ill-explored as yet, and worse dated—reveal a type of material culture in which the copious use of woodwork is demonstrated from the objects excavated or dredged from such settlements around Alpine lakes or in river channels of North Italy. The persistent use of wood, and of the lathe for wood-working, is illustrated in the modern culture of all this region;[68] geometric pottery has its "wooden" box-like shapes, close-fitting covers and structural bases or stands, flat perforated handles, "center-bit" ornaments; and the laborious cross-framing of the panel schemes attests the same source of inspiration.

There is a special reason for emphasizing this point, since the discovery that the climate of peninsular Europe, and therewith of peninsular Greece and the Ægean, was passing through a period of comparative cold and wet during the centuries when the Greek people was coming into being.[69] The onset of this "pluvial" phase has its significance in relation to the descent of highland tribes into the plains and the south country; for the first effect of such a change of weather is to spoil the crops round the higher villages, while improving the pastures in the foothills. Its persistence, similarly, accounts for the well established forests of early classical times; for the deciduous oak wood whose crackling leaves betrayed the Persian flank march at Thermopylae; for the poets' Arcadia, so unrecognizable now; for the charcoal burnings at Acharnae, and the plane trees by the bed of Ilissus. When you could really shape oars at Eretria, build ships at "Naupactus," and launch them at Aphetae and Ephesus, timber clearly counted for more in the structural economy of Greece, and for less in the undertaker's bill. To follow out the effects of the gradual relapse of the rainfall, during classical times, would take us too far from these origins; but it is essential to realize that during the

long period from the colonization of Ionia, which was an enforced refugee movement, to that of Pontus and the West, in the eighth century, there was land to be had, for the labor of clearing it, round the margins of Greek settlements, as in Cyprus much later; and that it was only when these backwoods had been in great part logged and ploughed that population suddenly gained upon subsistence, because the foothills had been reached once more.[70]

Language bears similar testimony. In Greek the master-building, *architecton*, is literally the "leading wood-worker." It is this "wooden age" which preceded the marble age of Greek sculpture and architecture, that has left contemporary monuments in the half-timbered structure and panel compositions of geometrical vase-painting.

In view of the traditional Attic origin of the principal Ionian cities,[71] it might have been expected that Ionian traditions of pot-painting would follow those of the mother country. But it is necessary to take into account their very mixed population, and especially their frequent intermarriages at first with "Carian" natives.[72] For the latter tradition, their predominantly "Asiatic" fibulae—as the dedications at the Ephesian shrine show[73]—are striking confirmation. For the former, the primitive abstention of Samos, for example, from almost all detailed ornament, has the same significance as in Attica itself. If later discovery should reveal a geometrical phase in any other Ionian school, it is fairly safe to predict that it will be found to arrive full-grown, as it did in Rhodes; that its upper limit will not be very early, and that it will throw confirmatory light on the date at which Attic geometrical notions began to spread oversea, as they are already seen to have spread over-gulf into Argolis, and over-land into Boeotia.

The Pictorial Contents of Geometric Panels

We come now to the pictorial subjects which are introduced sooner or later into all schools of geometric art in Greek lands, even into that of Attica. At first sight the reappearance of representations of birds, horses, fish, deer, and lions, looks like a survival of interest in wild nature like that which characterized Minoan art. But the very restricted range of subjects, and the selection of animals, either domesticated like the horse (which is usually represented either feeding at a manger, or led by its groom) or brought into relation with human life, as hunted game, or dangerous beasts, point rather to the interest of a *genre* painter in human concerns, and lead to the more ambitious episodes of dances, chariot races, funeral processions, land and sea fights, and other representations of ships. The almost complete absence of plants, so much easier to observe and to depict than animals, and so abundantly represented in Minoan art, is especially notable.[74] It is not natural form, but human activity, or at most man's animal friends and servants, for which the artist and presumably his customers care. Achilles' horses, and Odysseus' dog, are examples in Homeric art. The only representations of trees, until the very end of the period, are the completely conventionalized and very ill-copied renderings of the oriental "sacred tree" with attendant birds or deer: and the crudity of these is itself notable as evidence of the very slight interest taken by these vase-painters either in the beauty of nature, or in those foreign works of art, on a far higher plane of technical skill, with which they were certainly acquainted—else they could not have copied them at all—but which evidently did not greatly impress them. Such were the metal bowls of Cyprus, and the Idaean shields in Crete.

Here the ill-laid ghost of the "northern invader" rises up in judgment once more. Characteristic of the Orthia sanctuary at Sparta, even in quite early stages, are innumerable little bronze figures of horses and birds, usually ducks, or other water fowl.[75] Similar figures are found sporadically throughout peninsular Greece, as far to the northwest as Dodona and Leucas, and they recur on the Macedonian sites: their connection with the "spectacle"-fibula wearers seems to be established.[76] From the little bronzes and terra cottas, horses and water-birds spread into the void spaces of insular vase-painting, and are honored guests there.[77] That they should intrude into Boeotian panel-work is explicable, seeing how Boeotia was dominated by conquest folk.[77a] But they penetrate also into Attica, and not only as vase subjects, for terra cotta horses and duck-shaped vases were deposited in Dipylon graves.

How does all this, however, account for the contemporary vogue of terra cotta horses and ducks, and the same fancy for duck-shaped vases, in graves of the Early Iron Age in Cyprus;[78] or for terracotta horses and duck-vases sporadically in Asia Minor, roughly within the same range of space and time as the concentric-circle and pot-hook spiral?[79]

And there is more behind. In Minoan times, in the Homeric poems, and throughout the horse-using cultures of the Nearer East, until the dark period with which we are now concerned, horses were driven, not ridden. Homer, at most, knows of horse-riding as a circus trick; even Diomedes and Odysseus, when they stole the horses of Rhesus, brought away the car as well.[80] On the other hand, the horse with a rider occurs in terracotta associated with geometrical pottery near Carchemish; in Cyprus commonly; in Asia Minor sporadically, even in Caria which is not cavalry country; in Greece also sporadically; and ridden horses are twice figured on Attic geometrical vases.[81]

In Assyria, riding is first mentioned under Nebuchadrezzar I (1146), but organized cavalry not till Assurnazirpal in the ninth century.[82] Probably the earliest representation of a rider on oriental metal work in Greece is the mounted archer on a bowl from Olympia, but this is not earlier than the Dipylon paintings already noted. Only later are riders common in these designs.[83]

On the other hand, in Central Europe riders are represented, fairly often, very early in the Hallstatt culture, and riding became common in Italy quite independent of Greek influence.[84] Riding therefore seems to be well established in Central Europe quite as early as in Greece, though even the relative dates are not yet clear. The Lausitz people certainly had horses, before they spread over Hungary,[85] but it is not certain that they rode. The great reputation however of the Thracians and Thessalians of classical times as horsemen, though in Homer the Thracians were chariot fighters, makes it certain that the new skill was acquired here during the dark age. The nearest approach to folk-memory is the Greek legend of the Centaurs in the foothills of Pelion and Ossa; precisely, that is, in the district of Thessaly where the devastators of Macedonia can be traced farthest south. But though the Centaurs are also "Pheres"—in some sense "beastly" people—in Homer, all stories connecting them with horses are post-Homeric;[86] but their "invention" of horse-riding may be real folk-memory; and in early classical times Thessaly certainly was the great stud farm for riding-horses, and recruiting ground for mounted troops.

Of the new vogue of the horse, therefore, as a "friend of man" in geometric art, all that can be said is that it occurs at a phase when there is some reason to believe that the art of riding had brought about a new intimacy with horses and their ways; but there is no reason to connect this with the "coming of the Dorians," more especially as tradition

represented the Dorians as originally highland people, and as their mode of warfare was specifically that of close-ranked infantry.

The fondness for representations of birds and fish is a much more difficult question. On the one side there is much use of bird ornament—and always with a preference for water birds—throughout the Early Iron Age in Central Europe, propagated in northern Italy in close association with the figures of horses, and with the concentric circle. On the other, birds and fish are among the oldest of pictorial supplements to the painted style of ancient Susa, and recur at almost all periods in the derivative fabrics of Syria and Palestine. More perplexing still, the later Mycenaean decadence, especially in Crete, Rhodes, and Cyprus, loved friezes of birds, and once again water birds are the favorites. In the birds on the "Philistine" pottery, convergence of Mycenaean and Syrian designs is complete; in the Danubian province the relative dates are still too uncertain to determine which way there was borrowing, if either way.[87]

In regard to the lion, though the representations on geometrical vases have none of the vivid realism of Minoan lion scenes, and are clearly derived from Asiatic and already conventionalized models, it must be remembered that in the fifth century there were lions still in Chalcidice, as there were in Palestine in David's time, and in Assyria plenty, for royal hunting at all events, in the seventh century. And Homeric descriptions are far too graphic and accurate in detail to have originated either in folk-memory of old-time beasts, in study of gems and rings out of looted "treasuries," or in the yarns of ex-mercenaries from Babylon, like the brother of Alcaeus. Corroborative evidence is an unmistakable hyena on the Carian vase already quoted (p. 492). The popularity of the lion, then, in early Greek art, does not invalidate the general observation that the new subjects of pictorial design are of humanist not zoological appeal.[88]

Now it is significant, in this connection, that with the same exception of domesticated animals, dangerous beasts, and game including water birds, Homeric similes—the decorative art, so to speak, of Homeric poetry,—are confined similarly to *genre* subjects.[89] Even when Odysseus, stripped and battered after shipwreck, has to give immediate and irresistible proof of his quality as a person not decent only, but courtly and of rare and wide experience, he compares Nausicaa to a palm tree, selecting, curiously enough, the prototype of the "sacred tree" of the oriental repertory, yet enhancing it not by its natural habitat, the bank of a river or lagoon, but by a sacral context, the altar of Apollo at Delos; it was a seedling, an acclimatized and cultivated rarity, like the fruit trees in his father's orchard.[90]

The same concentration on *genre* subjects, and episodes of human experience, characterizes the only Homeric description of a great work of art in what may be regarded as the style of his own day, namely, the shield of Achilles. Two other pieces of great craftsmanship are indeed described in some detail in the poems, the breastplate of Agamemnon, and the sword belt of Heracles. But the breastplate is expressly stated to have been a present from Cyprus;[91] it occurs in one of those passages where the break of syntax marks as an afterthought the introduction of a breastplate at all; its array of emblematic figures,—Fear, Terror, Gorgon's head —suggests comparison with the bronze work of a local school in Crete, strongly influenced by the mixed oriental style of the Near East. These votive shields from the Idaean Cave[92] are the masterpieces of a series which begins with *genre* figures strongly reminiscent of the scenes on the Dipylon vases, and goes on to friezes of horses such as haunt also the minor and therefore more archaic zones of the engraved bowls from Cyprus (p. 505). Those with mythological sub-

jects are probably of the ninth century, and therefore about contemporary with the traditional Homer, "about four hundred years before my time," as Herodotus says.[93]

It is these processional friezes, prototypes in their turn of a great school of Ionian painted vases, which are the extant counterparts of the sword belt of Heracles, engraved or embossed with "bears, and wild boars and ravening lions, and battles and fightings and murders and slaying of men."[94] As this description is in a section of the *Odyssey* which has been under some suspicion of being an afterthought, it may perhaps be influenced by a maturer stage of actual craftsmanship. But the bowls of Phoenician or Cypriote workmanship from Assur-nazir-pal's palace at Nineveh, which most closely resemble this description, cannot be later than the middle of the ninth century; again very close to the traditional date for Homer.[95] If Odysseus' descent among the great departed be 'late,' it need not be later than the old age of the poet who celebrated the breastplate of Agamemnon and the shield of Achilles.

From this it is no far cry to that sole remnant of literary art from the mid-geometric age, Hesiod's *Works and Days*. Whatever else in the Hesiodic poems may be the work of later followers, the *Works and Days* is in the first place authenticated by the "standard copy" which Pausanias saw in safe custody at Ascra; secondly, it is dated astronomically to the beginning of the eighth century, by its allusion to Arcturus;[96] thirdly, it is itself an example of that genius for adaptation which marks the decorative art of the time—the metre and phraseology of Ionian epic applied to kail-yard themes and parish politics; and fourthly, it is a labored piece of panel-zone construction, short of breath, loose-jointed, garrulous as an amphora from Tiryns, with favorite rhythms insistently recurring, like the same amphora's broad and narrow bands; still more, like the "three-stroke" rhythm of earlier workmanship in the Dipylon manner.[97]

Rhythm in Geometric Art and Hellenic Literature

This last point, fantastic though it may appear at first, deserves and rewards elaboration. As a mark of Minoan mechanization, that rhythmical iteration of broad and narrow bands has been already compared to "jazz." But "jazz" ancient and modern is but the perversion of rhythm; and it was in the creation of a new art of rhythmical speech that the nascent genius of the Greek people made one of its chief contributions to culture. Emotional literature there had been before, in Babylonia, in Akhenaten's hymnal, in Hebrew dirge and battle song. What was new, in the verse composition of the Greeks, was the transformation of mere dance step—for do we not still speak, as they did, of metrical "feet"?—into a verbal music, in which not only had each *epos*, each "saying" or mouthful of words (not necessarily conterminous with grammar or sense) its lilt or cadence, but each cadence was composed of a beginning and an answering end, and each answering phrase had its internal structure, variable "foot" for "foot" within clearly defined limits. Of these "sayings"—or "lines," as we call them, from their later written symbols,—there were numerous kinds or "metres" (that is to say *measures*), anapaestic, hexametric, and, in increasing structural complication, elegiac "couplets" and lyric "stanzas."

Each of these measures certainly, in its beginnings, was of somebody's creation, and some community's acceptance as the *mot juste* in verbal melody. Among many such, some few lasted and spread: Hesiod carried hexameter verse from Cyme to Boeotian Ascra; Tyrtaeus, elegiac verse from Athens to Sparta; Archilochus from Paros to Thasos; Arion the Lesbian made the grand tour of Magna Graecia; Cinaethus "rhapsodized" in Syracuse. The Delian choir knew not only "all dialects" but "all rhythms." And it was remem-

bered as significant that at a certain stage the musical accompaniment fell away from admired recitative; the lyre gave place to the baton. Conversely Hesiod, bringing over the new epic recitative to old Greece was disqualified because he could not, or would not, chant and play the lyre at the same time.[98] That an uprooted people should have consoled their

1 2 3

Fig. 19.—Metrical and Geometrical Rhythms Compared.

On each vase-diagram broad and narrow bands are grouped in the same rhythmical order, from above downward, as the long and short syllables in the following lines: the caesura being marked in No. 1 by ornament, in No. 3 by the shoulder zone, reserved for a pictorial subject. Latin lines are selected, out of consideration for Greekless readers. For real vases decorated with jazz—see fig. 17, p. (470.)

1. Body:—*Per noctem resonare lupis ululantibus urbes.*
   Neck:— *Contulit in Tyrios arma virumque toros.*
2. Body:—*O fons Bandusiae, splendidior vitro,*
   Neck:— *Mox donaberis haedo.*
3. Body and Neck: iambic trimeter:—*Contaminari non decere fabulas.*

exile with arts of which no man could deprive them, has its parallel in Hebrew experience: "sing us one of the songs of Zion": men may still call their tongues and their ears their own, though they have lost their house gear and their clay pits. Those who saw Serbian refugees *dance*, in Corfu or Orford, during the War, to save their souls alive—"these men know what I say." *Anthrôpos pantôn metron.*

Now it is not wholly accident if all rhythms that have survived from this period of wide experiment, depending as

they do on the rhythmical grouping of long and short syllables, are the vocal counterpart of the schemes of broad and narrow bands which we have seen coming into vogue during the Mycenaean decline; still less that, expressed in that notation, they take place as exceptionally impressive schemes of such vase decoration, all the more recognizable in their analogy with actual vase ornaments when the char-

Fig. 20.—Rhythmical Panel Composition with Pictorial Content.
An attempt is here made to illustrate (1) the hierarchy of styles (p. 466); 2) the enhancement of the significance of the central subject by balanced repetition of allusive topics. Into pentameter rhythm the same composition may be translated thus:—

Sol | *fovet altus aves,* || *quadrupedemque puer.* ||

and the pentameter rhythm is repeated in the narrow zone above, with caesural center-panel.

acteristic sequences of two or three "long" syllables are represented by a single band of double or treble width.

Still less is it accidental that "lines" consisting of a beginning and an answering end, translated into the transverse subdivisions of a paneled zone, range themselves similarly among characteristic panel schemes of the more elaborate vases; the significance of the component words supplying the literary counterpart to the "filling" of the panels within such frames, as in fig. 20.

That the spoken rhythms admitted far greater play of internal adjustment than visual patterns is obvious. Auditory rhythms are perceived in sequence, so that the end must follow an irretrievably passed beginning; visual pat-

terns are presented almost simultaneously to the eye, and, being permanent in space, can be read equally well in both directions. That this imposes a bilateral symmetry on the painter, which the poet can ignore, is a distinction of profound importance. Yet it sometimes happens, even in apparently rigid geometrical schemes, that there is a "movement" in the whole design, from right (for example) to left, which so far from destroying the symmetry, enhances it by an effort of balance. For instance, on a nine-paneled bowl from the Dipylon cemetery,[99] with designs arranged $|a|b|c|d|e|d|c|b|a|$ the conspicuous meanders at *c* are both right-handed. On another nine-paneled bowl,[100] arranged $|a|b|a|c|d|c|a|b|a$, the large maeanders at *b* are both counterclockwise , and both the panels at *c* are shaded diagonally from top right to bottom left. As soon as unsymmetrical animals with a head and a tail are introduced, bolder effects are attempted, of "elegiac" quality. On another Attic vase,[101] though the structure both on neck and on body is $|a|b|\overset{c}{\underset{c}{d}}|b|a|$ the birds at *d* on the body zone move to the left, but the maeanders on the neck zone to the right. The two central panels read vertically $|c|d|c|c|d|c$; but one of those *c* zones is emphasized by carrying it right round the vase, so that it acquires a function analogous to that of a hexametric *caesura*, thus $|c|d|c|c|d|c$.

Other examples show how far this kind of progressive symmetry could be carried. In a vase from Rhodes,[102] the bird in the central panel "moves" to the right, and though its flanking frames are symmetrical, the meander panels which are the secondary theme are both broken upward to the right; they "move," so to speak, in series, not both of them inward, and supplement the movement of the bird; and beyond these again the tertiary theme of lozenge-paneling is treated with different width and elaboration at

each end; while the zone of small panels below does not at any point coincide with the spacing of the principal themes. Even greater boldness is shown in a vase from Eleusis[103] with a panel scheme:—|*A*|*b*|*c*|*d*|*e*|*d*|*f*|*b*|*A*| ; where *c* is a foliated spiral, *f* is a guilloche, and *b b* are shaded obliquely in the same direction, not reversed. But the whole composition is knit together by the massive flanking panels *A A* at each end.

Another scheme, like our four-line rhyming stanza, has alternate centers, about each of which the composition is symmetrical as the vase is turned round:—*a* (*B*) *a c a D a c a B a c a* (*D*) *a c* ; but though (*B*) and (*D*) stand each nearly over a handle, the whole scheme has slid almost one panel to the right of the middle line of the vase profile.[104] And yet again, a scheme of seven panels, (*a*) with three zigzags, (*b*) with tooth ornament, and (*c*) with oblique lines, is made progressive by the left-hand slant of both (*c*) panels; but (*c*) is repeated again as the lateral panel of another set of five |*c*|*b*|*a*|*b*|*c*| between the original centerpiece (*d*) and a new design (*e*) far to the right, so that the whole series of ten reads from left to right:—|*a*|*b*|*c*|*d*|*c*|*b*|*a*|*b*|*c*|*e*| ; while the secondary zone below it reads *ab*|*a*|*c*|*ada*|*c*|*a*|*ba*, a quite different rhythm, as the last two lines of an alcaic stanza differ from the twin leading lines, and admit of alternative analyses into metrical "feet."

With this acquired insistence on panel construction within the principal zones of ornament, and with that inherited insistence on rhythmical transition from zone to zone, and eventually also from panel to panel, we reach a more intimate and fundamental characteristic of the Greek geometrical style,—its genius for rhythm and for symmetry,

for constructive composition; that is, for transcending the potters' counsel of despair out of which zone dissection and panel dissection alike originated. For these are qualities no less characteristic of the architecture, and also of the literature, which have come down to us out of the same dark age where Greek genius came into being.

With this word *rhythm*, indeed, we come to the heart of the Greek geometric style, and therewith to a quality which comes into the creative art of the western world through what is often called the "dark age" of Greek history. A dark age indeed it is in some respects. In literature we have nothing between the Homeric poems and the first fragmentary lyrics, except the didactic verses ascribed to Hesiod; and what is characteristic of these is their attempt to classify, catalogue, and to this extent explain, the manifold variety of the farmer's year, the chaos of popular beliefs about the powers of nature, and the vagaries of female behavior. In architecture we have only the piecemeal reconstruction of the Temple of Hera at Olympia, and one capital of doubtful date from Cyprus,[105] to connect the Mycenaean capital with the mature Doric, by gradual emergence of cushion-capital out of two-storeyed: but to the stages by which the proportions of the fabric, and the number of its columns, were determined, we have almost no clue. In political structure, too, we have only various attempts, mostly of uncertain date, to group the corporator-clans of a Greek city-state into tribal and subtribal divisions; to determine, once for all, in each growing community, what later theorists described as the "Number of the State." All these attempts to impose a pattern and a rhythm on nature's variety, raise more questions than they solve, because the material is fugitive and fragmentary. In these geometrically decorated vases, however, we have copious original compositions, in the literal sense of that word; elaborate subordinations of secondary to principal, and progressive symmetry of parts; and they go

back into the seventh, eighth, and ninth centuries at all events, and probably earlier, though there is at present not much external evidence for date, to supplement inference from the growth of the style itself. Yet from achievements such as these, with the limited resources of the geometric vase-painter, to the balanced constructions of the pedimental groups at Ægina, is hardly a longer step than from Ægina to the Parthenon.

Rhythmical Structure in Literature of the Geometric Age

Thus far, we have been illustrating the structure of geometric ornament from the more subtle, but also far more adequately studied principles of Greek prosody. It will obviously go far to verify the suggestions already made, if the process be reversed, and the principles of geometrical composition are applied to the criticism of a literary masterpiece.

Attention has already been directed to the preference for subjects essentially of human interest, and to the method of composition, under limitations of rhythm and symmetry, enhanced rather than overstepped by expedients of equipoise and compensation; and illustrations have been given of each of these.

Very different from those, and, in spite of its greater elaboration, more akin in spirit and outlook to the *genre* art of the similes, is the sequence of scenes on the shield of Achilles.[106] Many attempts have been made to reconstruct this masterpiece from the poet's description. All have failed, more or less, because they did not realize two complementary things: on the one hand, the vividness of the poet's folk-memory of a great period of technical skill, in the past age which he describes; on the other, his dependence on the taste of his audiences, in matters of narrative and decorative description, for the choice of subjects which that skill was to depict.

In the technique of inlaid metals of several colors, as well as in the continuous free-field handling of the narrative subjects—which run one into another like the episodes of the Bayeux tapestry or the incidents of the Nile scene on the inlaid dagger from Mycenae—we have folk-memory, if not literary commemoration, of Minoan craftsmanship in the shaft-grave period, three or four centuries before the Trojan War,[107] of the same quality as that which has given us the graphic description of the "cup of Nestor," another reminiscence of shaft-grave splendor; and as the more naturalistic similes, closely reminiscent of Minoan gem-engraving. The composition, too, recalls the vivid realism of the "lion-dagger," and the brisk action of the sarcophagus from Agia Triada. But the scenes themselves, depicted though they are in this traditional technique of grouping and color, are not drawn from the wild nature which inspired representative art work in Minoan times—the Nile scene, the dolphin fresco, the cat and pheasant, the lilies, sweet peas, and crocuses, of the earlier "palace style"[108]—but from civil and political life. If there is lion-hunting, it is in defense of flocks and herds; if there is foliage, it is of vines trained on a trellis; just as the poet only once describes wild flowers, but twice goes into horticultural details, in the orchards of Alcinous and Laertes.

Further, the scenes on the shield are not sketched at random, nor presented to us without frame, context, or mutual connection. Obviously the "city at war" balances the "city at peace"; the scenes of country life balance each other also. If the whole, as has been suggested, is conceived as a single long frieze (after the manner of the Mycenaean inlay work, or the "hunter's day" on two silver bowls of later Cypriote work[109]) there is nevertheless intimate connection between the beginning and the end of the descrip-

tion, as there is a starting point from which diverging movements pass round the decorated zone to meet again opposite, as on some of the Cypriote bowls[110] and Idaean shields.

490–	City at Peace:	"women at the doors": the bride "comes out"		A
(495–)		seated women; marriage feast group	(melée)	b
493		bride and bridegroom	(balanced group, cf. m′)	c
		procession toward feast	(above)	d
494–	I	DANCE: music	(center piece)	C
497		procession toward trial	(below)	d′
498–		plaintiff and defendant	(balanced group)	c′
503–		seated elders: heralds and crowd	(melée)	b′
509	City at War:	closing the scene on either hand		A′
(514)		defenders of the city: women on wall	(battle by city)	e
510–		two enemy leaders disputing	(balanced group)	f
516		enemy moving on city	(above)	g
516–	II	TWO GREAT GODS	(center piece)	D
520		enemy moving on cattle	(below)	g′
523		two scouts } cattle	(balanced group)	f′
525		two shepherds } cattle		
531–		rescuers in chariots (battle by river)	(balances ploughs below)	e′
533–	Eris and Kêr	destroying corpses after battle by river	(struggle group)	B
541–		ploughing in corn land	(balances chariots above)	h
545		cupbearer facing ploughman	(balances musician)	i
550–		cornfield and reapers		j
555		harvest procession	(toward king)	k
556–	III	THE KING'S FEAST	(center piece)	D′
561–		vintage procession	(toward king)	k′
567–		vineyard and vintners	(trellis balances stalls *m*)	j′
569–		musician	(balances cupbearer)	i′
573		oxen	(balancesoxen (*h*)sheep(*l*)	h′
574	Lions (2), Men (4), Dogs (9) in melée (cf. Eris and Kêr)		(struggle group)	B′
587–		sheep	(balances oxen *h*′)	l
589		pens and stalls	(balances vines-trellis *j*′)	m
590–		men dancing in line	(balances *d*′ above)	n
599–	IV	DANCE round	(center piece)	C′
602–		women dancing in line	(balances *d* above)	n′
605		two tumblers	(balanced group: *c*)	m′
604		singer seated (against what background?)	(balances seated *b*)	l′
	[Houses, closing this scene, form background also of the "City at Peace" with which 490 begins.]			[A]

Fig. 21.—Design on the Shield of Achilles: *Iliad* XVIII, 430–606.

These scenes, that is, are not only *genre* scenes, in the manner of the great geometrical vases, but elements in a larger composition.

But the structure of this amazing passage goes deeper far than this; as will be clearer after study of the diagram (fig. 21) and comparison of it with the Homeric text.

Here are four principal compositions, with beginning, middle, and answering end which also introduces the new scene; or, if there is a complete break between the main subjects (as at l. 540), transition is effected by balancing, against each other, one of the lateral topics in each of them—the cupbearer and the plough-teams (541–5) against the shepherds (525) and the chariots that come to their rescue (531–2). With four main compositions, then, there are four centerpieces and four pilasters or framing-groups. But of the latter, only two, the "city at peace" (*A*) and the "city at war" (*A′*) are statical, and these are adjacent: the other two pilasters are rather framing-groups, and both are in violent motion;—(*B*) Eris and Ker destroying corpses (533–40) after the "fight by the river" (526–33), and (*B′*) the Lion-hunt (579–86), which is quite as elaborate a scene, for it includes no less than fifteen enumerated figures; so the pendant battle scene (*B*) was probably quite as populous. These two framing-groups are also adjacent, so that in the poet's description the four "pilasters" run thus:—*A A′ B B′*. This arrangement by itself is both unsymmetrical and unsatisfying; there is moreover no fifth pilaster group, to close the fourth panel, as was necessary, if both ends of a fourfold panel zone were to be "in the air." Furthermore, if they were so—if the composition is to be accepted as merely linear,—how did the poet conceive it accommodated to the confined surface or closed recurrent border of a shield, within the "ever-flowing stream of Ocean," which we may safely take to have been represented by some kind of marginal "wave coil"[111] as in figure 18 *2*.c. (p. 497).

Look, however, at the contents of the panels. In the first, the "city at peace" (490–508), the centerpiece (*C*) is a dance between processions (*d d′*) diverging toward the balanced tableaux of marriage (*c*) and litigation (*c′*) with their seated groups of elders (*b*) and married women (*b′*) respectively, backed by the houses and walls (*A A′*) at each

end. In the fourth panel (587–605) the centerpiece is also a dancing group (C') flanked by lines of men (n) and women (n') dancing in line, and followed by the two tumblers (m') and a singer (l'). From the balance between the content of C and C' with their accessories, and especially of the tumbler group (605) with the bride and bridegroom group (493) beyond the "city at peace" and its seated women, it is clear that the missing "pilaster" is the "city at peace" itself, and that the singer is seated—one always sits to sing in Homer,—to balance the seated women on the other side of this group of houses. The whole series of panels I–IV, then, is a closed series, returning upon itself, like the decoration of a bowl or a vase; it is in fact the decoration of the principal zone of a round shield, as the poet says. To describe it, he has to begin somewhere, and he begins where the panel structure is clearest, namely at the first of the two cities, and passes on to the other; after this experience, the audience will pick up the higher art of the framing-groups B B' well enough; and the dance and tumblers, between C' and the end—preluded as they are by the sheepfolds (589)—show that we are once more approaching the "city at peace,"—so why mention it again?

There remains the content of panels II and III; and here too there is balance and counterchange; for the subject of panel III is once again the "city at peace" on its economic side, focussed on (D') the King's Feast (556–60), just as the "city at war" on its military side is focussed on the Two Great Gods (D) who direct operations from the center of panel II. In each panel there is again a pair of processions, the two armies moving outward from the Two Great Gods to attack city and cattle respectively; the two lines of gleaners (k) and vintagers (k') moving inward to the King's Feast. These two scenes moreover are linked as already noted by the line of ploughs (h) answering the line of chariots (e') on the other side of the struggle group of Eris

and Ker. So too panels III and IV are linked by the oxen (h') and sheep (l) which flank the Lion-hunt (B') which is their framing-group.

There is thus a fourfold scheme, not merely $A\ A'\ B\ B'$ (in order of pilaster frames), nor even $C\ D\ D'\ C'$ (in order of centerpieces); for we have already seen that, when the pilasters run $B'\ A\ A'\ B$, the central theme is the "Tale of Two Cities" flanked by the two lateral groups of struggling figures; and we realize now that with a quarter-turn of the whole "shield," the composition is $A'\ B\ B'\ A$: the massive walls and houses of the two cities gripping the whole composition, and emphasizing the counterbalance of the great struggle groups $B\ B'$. And what are these two great struggles? Nothing less than the struggles of Man, with wild Nature in the Lion-hunt, and with other powers wilder still, Strife with other men, Confusion, and Destruction—the "battle, murder and sudden death" of our own litany. The Tale of Two Cities, like a dissolving view, has become a parable, and a philosophy, of Natural and Moral Order.

Now to enjoy either of these compositions, we must needs let the other fall to secondary significance. Not, however, quite to insignificance. The supporters to the Lion-hunt B', for example, are the oxen and sheep ($h'\ l$) with the feast D' and dance C' beyond, two aspects of human activity and fruition. Still more impressively, Strife, Confusion, and Destruction at (B), stand between the King at his Feast (D') and the Two Great Gods (D); the two sources of order in the world are faced and momentarily severed by the grim fact of disorder, in almost Zoroastrian parable. Only when kings work together with gods, is evil enmeshed, and humanity safe; only when king and people work together, does man win his fight with lions or any assault of nature.

Thus the full beauty and artistic meaning of the design as a whole depends upon the combination of whatever for the moment is the "pattern" or representation, with the

"ground" out of which it stands forth. Yet the "ground" is itself a "pattern," to which what seemed but a moment ago to be "pattern" is now apprehended as the "ground." But this is nothing less—and also nothing more, in principle—than the geometric vase-painter's discovery of the miracle of counterchange, which gave him the maeander, and that "wave coil" which we have just seen serving for the Ocean stream, as indeed it is used to depict water-surfaces on early figured vases.[111] Moreover, in a closed zone surrounding a vase, bowl, or shield, a part of the whole pageant is necessarily either at the back and invisible, or at the bottom and upside down. When *B B′* are in full view, *A A′* are marginal, and panel I is eclipsed; when *A A′* are central, *B B′* are marginal and panel III does not count. But the poet's design is engraved in something more limpid than glass, as it has been more lasting than bronze: wrought in rhythmical Greek, the harmony of the whole design shines through. No wonder it got about that Homer was blind.

With this clue in mind, we appreciate the value of the quite recent discovery[112] that the *Iliad*, as a whole, has what has been described as a "pattern"; episode balancing episode, even simile answering simile; and this, not in mere pedimental symmetry, but with a progressive enhancement of each following complement and response, which makes it anticipate the next scheme of balances, as well as satisfy and complete the scheme, most of which has already gone before. This is composition like that of music, rather than painting; but it has its analogy in graphic art, and even in the "movements" perceptible sometimes in geometrical decoration, as we have seen already (p. 514). Yet it is a point which has not been appreciated in regard to these early phases of Greek artistic composition, though it is a commonplace in regard to the great age of pediments and red-figure vases; and as applied to the structure of the Pindaric ode, Æschylean chorus, Herodotean 'digression,' and in the supreme craftsmanship of Thucydides' preface to his history.

But what a revolution in decorative art was effected, when the Attic designers supplemented the mere subdivisions of zones into panels, by the joiner's device of cross-framing, whereby the lateral compartments of a broad zone were bisected horizontally like a window frame; still more, when the principal zone was framed and reframed with various ornamental bands, to emphasize and enhance its importance. Subdivision, subordination, and consequently composition, were now practicable in two dimensions; it only needed a third to bring sculpture and architecture into being, as rational marshaling of masses; and in sculpture the crude processes of intersecting silhouette may be followed still on the rough-hewn colossus in Naxos, fractured before it left the quarry.[113]

But since arts of speech, like music, are in the single dimension of time, it is here that comparison between graphic and poetic composition lapses. It is noteworthy, however, that it was not in Attica, nor so far as we know in any region where the new range of composition was practiced in decorative art, that the first masterpieces of literary composition were achieved. Epic, for all its pageantry, is a procession, not a tableau; its single zone admits no "upper register" as on the François Vase or the Chest of Cypselus;[114] the poet's vases, so to speak, have infinite circumference but no neck; his temple, an endless frieze but neither metopes nor pediment. It is indeed Ionic, not Attic art. It achieved magnificent compositions, but they are in a relatively simple medium and technique. It achieved them early, because its technique was so simple; and having achieved them, it relapsed into schoolpieces and a conventional "Cyclic" aftermath. For the counterpart to Attic designs, even of the "Dipylon" stage of construction, we must turn to tragedy, with its episodic "scenes" enframed in choric "odes," its wagon platform permitting the segregation of actor from chorus, like the upper and lower register of a Dipylon vase;

to Thucydides with his alternation of narrative and speeches; to Herodotus with his more than tragic complexity of parallel narratives, and digression within digression, anticipating the large and small type, the text, footnotes, and appendices, of the modern printed page. For here alone, as yet, has two-dimensional construction been achieved in literature.

Geometrical Art as Index to the Culture of the Dark Age of Greece

It has been worth while to spend so much time on "geometric" vases for another reason also. Not only are they original creations, of a period for which we cannot be certain that we have any other artistic materials except a few seal-stones and fragmentary strips of engraved bronze; they are also the work, not of statesmen or strategists, not even of orators or poets, but of ordinary craftsmen working for normal customers. We do not know what the status of the potter was, among other artificers, but we have no reason to believe that it was eminent; any more than we have reason to believe that in medieval Europe masons or glass-painters were eminent. We are probably dealing, that is, with an average sample of artisan society, distinguished and immortalized for us by the mere accident that they worked in clay, which, once shattered or entombed, is *aere perennius*. To their customers, on their customary handiwork, with dexterous hands interpreting orderly minds, these men "told their souls," in an age none the less competitive in that it had no newspapers to say so. Among themselves too, they not only competed but argued: "potter wrangling with potter, and carpenter with carpenter," as artists competed and quarreled in Florence or the Vatican of Julius II.[115] Within the limits set to their art by popular demand for serviceable and presentable pottery, they practiced in advance what Delphi preached in due time, to

"know themselves" and do "nothing in excess." If ever a class of men were *dikaioi*, "true to type," while expressing their several individualities, it was the potters of the geometric school; theirs it was to "do their own job and not meddle"; even if occasionally a guilloche, or a rosette, or a "sacred tree," on some bit of foreign bronze or ivory caught their eye and their taste for a moment, and flashed into their designs.

Now these men and their contemporaries, all the while, were doing what is at the same time the hardest and the simplest thing in the world;—creating a new type of society, the Greek city-state. Literally, and in a time of almost unparalleled political chaos, that new social structure came into being "to keep men alive," when the "divine-born" dynasties and the Olympian gods themselves had failed; when *Diké* and *Nemesis*—right doing and right thinking—had withdrawn to Olympus; and men like Hesiod wished they had never been born.[116]

Failing to distinguish between Dorian conquerors and the art of conquered populations working for them, some students of this period have found it difficult to understand how it comes about that the most ambitious and impressive local school of this geometrical art was in Attica; and especially why it was at the very gates of Athens. Now it is true that the great Attic school of geometrical art appears, like Athena herself, already mature. There are Late Minoan remains at Athens itself and elsewhere in Attica; later still, at Salamis and Eleusis; but at present no such first steps in geometrical style are known, as we should expect if the style were indigenous here. Even the graves on the west slope of the Acropolis are far from "protogeometric."

But Attic genealogies strongly support Attic folk-memory of the part which Attica was forced to play during the "coming of the Dorians,"—a part which it had already played with great and immediate advantage in the days of

Theseus, the contemporary of Atreus. The movement of intrusion being twofold, directly from the north, through Thessaly and Boeotia, and circuitously from the northwest, through Ætolia and Elis into Laconia and Argolis, dispossessed people were driven inward over both the land frontiers of Attica, which thus became, first, overpopulated with refugees of all sorts, and then a great rallying ground and starting point for roughly organized settlements among the islands, and on the coast of Asia Minor. There is no reason to assume that this immigration ended when the conquerors ceased to advance; nor that all who took refuge in Attica left it again for permanent homes oversea; on the latter point, the genealogies of Miltiades, Pisistratus, and Harmodius are conclusive. There was, in fact, the same good reason for the emergence of a great school of geometrical art in Attica, during the following centuries, as there was for the creation of a competitive fabric of black-glaze pottery in Boeotia, during the last years of the Peloponnesian war, when Athens in its turn was in economic distress and political unrest; or for the creation, since 1922, of a great industry of carpet-weaving in Attica, by Greek weavers expelled from all parts of Asia Minor. The Flemish and Huguenot weavers in England are other examples of this process.

Here, in the Potters' Quarter, northwest of the Old Town of Athens, and on the margin of the Cephissus valley, was excellent pot-clay; on the hills across the valley, and upstream, accessible fuel; and, above all, there was in Attica the sole survival of the old régime of the Minoanized mainland. The political achievements, first of Cecrops and Erectheus, then of Theseus and the Ionian refugees from North Peloponnese at the time of the Pelopid conquests in Argolis and Laconia, had stood firm, when the Cadmeian régime was shattered in the two Theban wars, and when the Atreid and Æacid feudatories had failed to keep out the northwestern highlanders. Attica had been the prototype, and

remained the pattern, of a new type of political society in which communities, originally independent, had found occasion, and leadership, for "keeping house together"—*synoikismos*—in such fashion that a man *was* a citizen of Athens by the mere fact that his family had been resident members of Acharnae or Marathon or Pallene when the great achievement occurred. In the same way, later, an Æolid family from Peloponnesian Pylos, a Cadmeian family like the Gephyraeans, even mere worshipers of a Carian Zeus, like the forefathers of Isagoras, were as competent to become Athenians as those Æacids from Salamis who had only half a mile of water between their own island and the United States of Attica.

In this way is explained the puzzling fact (p. 504) that while Athens acquired exceptional facility in the geometrical style, Samos, and apparently also other Ionian cities, more or less directly originated by emigrant swarms out of Attica, did not. For if their foundation dates are truly reported, they were founded so soon after the traditional date for the "coming of the Dorians" that it is difficult to believe that the "geometrical" style had been at all fully established in Attica or anywhere else.

Similarly the prevalence of the new style in Attica, which was not conquered permanently by Dorians, though it was raided by them, while Argolis, which had Dorian masters, developed a peculiar art of its own in the Early Iron Age, is explained by the fact that in Argolis, though not in Laconia, compromise occurred between the conquerors and certain classes of the pre-Dorian population. Here there was still patronage of the old sort, for potters as for workers in bronze; a higher quality of technique was conserved, and only certain elements and aspects of the decorative art of the invaders were assimilated in Argive and proto-Corinthian workshops, in unusual combination both with Mycenaean survivals and with features (such as the flat lip)

of which the origin must be sought in the *alabastra* in fine stone or foreign clay, from Phoenician and Egyptian factories. The latter were transmitted through those oversea settlements, the Argive-Dorian cities of Rhodes and its neighborhood, which lay on the ancient through-route which the Sea-raiders had for a while obstructed but which was reopened by degrees and was the *raison d'être* of that "sea power of Rhodes" which interrupts the long sequence of continental sea powers—Phrygian, Lydian, Thracian, and Pelasgian, in the list preserved by Eusebius.

Retrospect and Conclusion

We have now traced the long argument down to the point when the Greek dialects of historic times are in their eventual distribution, though memories remained of an earlier and narrower range going back to the days of Hellen, and Deucalion's other sons; when the cherished memory of the "divine-born" dynasties led to the creation of a new link between man and the powers around him, that peculiar institution of hero-worship, which in due time led to the deification of kings and emperors after similar "distress of nations with perplexity." The same cherished memories have taken shape—probably in the same early circumstances—in the Homeric epic of warfare and wanderings. In the same confused time, Homer and Hesiod have "made their gods for the Greeks, and ordered their worship," classifying and subordinating in one great Olympian panel-construction, gods Olympian and chthonic, arboreal, mouse-god, and locust-god; Pan and the Nymphs, and the Graces of Orchomenus. We have watched the material culture compounded, fused, shattered, disintegrated, and now reconstructed with a conception of symmetry, composition, rhythm, which only needed topics and technical improvements, to grow up to Hellenic mastery, restraint, and grace. Finally, in the long period of quiescence, under the strong

screen of Hellenized Macedon, of Phrygia, and then of the Lydia of Gyges and Alyattes behind the new city-states of Ionia, we have the manifold contributions of the Mediterranean, the Highland, and the grassland reservoirs of the North, interbred, blended, selected, by the stern test of a hard country and an arduous life, into the new unity of a Greek-speaking, Greek-living, Greek-thinking nation, the Hellenes of the great age. Of their achievements, of our perennial debt to them, of the unexhausted inspiration (or rather, mere sanity) which intercourse with them brings, this is not the place to speak. What these lectures have tried to disentangle, out of the confusion and the darkness of our ignorance and half-knowledge, is some outline of an answer to the previous question—*Who were the Greeks?*

EPILOGUE

The whole course of the argument will be better appreciated with the help of a brief analysis of its principal topics.

1. The ancient Greeks believed themselves to have Greek nationality because they were of one blood, one language, one religion, and one culture and outlook on life; and appealed to their own folk-memory in proof of this unity. All these criteria fail, however, when applied to the data now accessible. The Greeks of classical times were of mixed descent, spoke different dialects of a hybrid language, combined Olympian with chthonic cults and rituals, contrasted Doric and Ionic manners and ideas, with growing insistence, throughout the "great age" of Greece; and their traditions intermixed indigenous stocks, which were not Greek, with immigrant culture-heroes, pervasive Hellenes, migratory Dorians and Æolians transposed and superposed on other kinds of Greeks. Wherein then does Hellenic "unity" consist? Who were the Greeks?

2. Their Ægean cradle-land, with its peculiar physique, and its intimate relations with other Mediterranean coastlands, neighboring sections of the Mountain-zone, and neighboring annexes of the Eurasian steppe, has been for long the recipient of inhabitants from all the three primary breeds of the White Race of mankind. But it also lies sufficiently aloof and self-contained to impose its peculiar geographical controls on each and all, selecting the strains best fitted for acclimatization. As a physical variety of man, a Greek type is always emerging in Greek lands, and during a long interval of quiescence from the eleventh to the seventh centuries B.C., did actually establish itself by elim-

ination of unconformable, uncongenial traits. From mongrel ancestry, the Greek people of classical times had come to consist of closely related types, approximately thoroughbred. Renewed facilities for intercourse, however, intercrossed these secluded types, in the centuries from the sixth to the fourth, and Alexander's conquests disseminated these already cross-bred Greeks over large continental regions; and here heterogeneous interbreeding with foreign stocks once more replaced the "classical" type by numerous mongrel descendants. Similar quiescence and segregation in the mediaeval centuries permitted the re-establishment of comparatively pure-bred strains in the islands and other secluded districts; but modern facilities for intercourse are repeating the Hellenistic experiment.

3. The fortunes of the Greek language were similar. Indo-European speech seems to have been introduced into Greek lands during the same period as into Asia Minor, and into northern Mesopotamia and the highlands east of the Tigris, as the result of profound disturbance of the population of the Eurasian steppe about 2000 B.C. Once introduced, however, both in Asia Minor and in peninsular Greece, Indo-European languages took shape in intimate contact with civilizations and languages already established there, but with different degrees of disintegration in these two regions. The complex physical subdivision of peninsular Greece favored the differentiation of principal groups of dialects, and the geographical distribution of these dialects in early historic times makes it possible to trace the later stages of regrouping and superposition. Documentary evidence from Egypt and the Hatti archives in Asia Minor reveals names of personages and peoples, and a political situation in the eastern Mediterranean, fully enough to confirm these inferences, and to trace back the outlines of the process of redistribution into the fourteenth century B.C.

4. Greek religion, like the Greek language, turns out to be a blend of beliefs and practices closely akin to those of other Indo-European-speaking peoples, with others which have their counterparts in the Mediterranean world, and with the worship of great goddesses of fertility, not necessarily derived from that Great Mother whose worship seems to have taken formal shape in Asia Minor, but expressing similar interpretation of the facts and processes of life. In the Homeric poems, the particular concourse of personal gods which became normal in Hellenic society appears already almost completely assembled, but almost devoid of those heterogeneous and local accretions which would have made classical polytheism chaotic, if its Olympian framework had not been already secure. That Olympian beliefs, of the kind displayed in the Homeric poems, had suffered severe shock and disillusionment, is inferred from the Greek practice of hero-worship, which is post-Homeric, but perpetuates pre-Homeric rituals in respect of beneficent individuals of the Age of Heroes; and that age can be approximately dated to the thirteenth and twelfth centuries. It is this Olympian hierarchy which justifies the Greeks' claim that they had "similar gods and rituals."

Incidentally, the blondness ascribed to Olympian gods attributes the same characteristic to their original worshipers, and confirms the conclusion that this system of beliefs originated north of the Mountain-zone, like analogous beliefs and practices in northern India, Iran, and Italy.

5. Analysis of the material cultures of the Ægean shows confluence of elements derived respectively from other shores of the Mediterranean, from the continental interior of Asia Minor, from the Danubian cultures of the later Stone Age, and from the "painted-ware" culture of the steppe region west of the Dnieper through derivative centers in Thessaly. Within the central archipelago, a mixed population, with mixed inheritance of culture, created in com-

petitive intercourse a vigorous technique and original style, and initiated exploitation of the peninsular mainland. In Crete, meanwhile, easier intercommunication with Egypt, due to geographical facilities and insular resources, initiated the still more original and acquisitive "Minoan" civilization, which eventually dominated both the island-world and the eastward-facing coast regions of the mainland; but was superseded about 1400 by the expansion of the derivative "Mycenaean" culture.

The aggressive vigor of the mainland culture seems partly to result from infusion of elements derived from the Central Greek "gray-ware" culture, the origin of which is obscure, but the effects conspicuous, to south, to north, and to west of earlier establishments in Phocis and Boeotia. The probable date of its emergence there falls sufficiently close below the probable arrival of Indo-European-speaking folk, to suggest some connection.

6. Approximate chronology for principal phases of Minoan and even of mainland culture is provided by Egyptian cross-date marks, down to the Fall of Cnossus about 1400 B.C. The long period of Mycenaean expansion, followed by gradual dislocation and decay, cannot be so securely dated. But Greek folk-memory of events, and especially of genealogical sequences during this period, is sufficiently coherent, and sufficiently cross-connected with archaeological distributions on the one side, and contemporary record of events, such as the Sea-raids, on the other, to furnish such a perspective; and to prolong it, through the "period of migration" in the twelfth century, into continuity with Hellenic families.

The movements of tribes and adventurous families, thus disclosed, are in sufficiently close accord with those already inferred from the geographical distribution of the dialects, to be accepted as giving chronological precision and historical context to those events; and in particular to the

achievements, within peninsular Greece, of a western counterpart to those Land-raiders who destroyed the Hatti régime in Asia Minor, and established in its place the Muski, whom the Greeks knew as Phrygians.

7. Thus between the Minoan civilization of full Bronze-Age character, and the nascent Hellenic, which is fully acquainted with iron, intervenes a transitional period of about four centuries (1400–1000 B.C.) within which various profound changes went on collaterally, and not necessarily in causal connection.

a. Cremation, which was characteristic of the "Age of Heroes" but never wholly superseded burial in Greek lands, is certainly of Central-European derivation, and perhaps origin; but its transitory apparition in Leucas, at a rather early phase of culture, shows that its spread southward was gradual, and suggests that it may have been long established in the northwestern highlands before it was propagated farther. East of the Ægean, evidence is still too fragmentary to yield general conclusions, but in North Syria cremation appears in immediate sequel to the Land-raids, as the Homeric description of Trojan ritual would lead us to infer; for Laomedon's Troy stands to the Phrygian advance through Asia Minor, as the Pelopid régime to its minor counterpart in Greece.

b. The Ægean origin of the safety-pin, now sufficiently established, makes intelligible the geographical distribution of the principal types of Greek and Asiatic fibulae, and thereby confirms historical inferences already drawn from the distribution of languages, dialects, and political régimes. In particular an archaeological counterpart is offered to that temporary range of intimate intercourse between Ionic-speaking and Æolic-speaking people which is presumed by the peculiarities of Homeric idiom.

c. Similarly the distribution of the leaf-shaped swords in bronze illustrates the Mediterranean activities of those who

used them, and goes far to determine the proximate origin of these intruders; for this type of sword is of Danubian invention. But the distribution and design of the first iron swords in Greek lands and the Levant dissociates them from their Central-European counterparts in the Hallstatt culture, and confirms Greek folk-memory of the introduction of iron from a Phrygian source, probably derived from the same iron-working region in eastern Asia Minor as had been exploited already by the Hatti régime in the thirteenth century, and was eventually reached directly by Greek traders through the colonies of Miletus on the Pontic coast of Asia Minor. Probably the Danubian cultures first acquired knowledge of iron-working from the same Asiatic center and by way of the Marmara region and Thrace; but the possibility of direct intercourse across the steppe between Hungary and the Caucasian iron-workings (which belong to the Muski sphere of influence) is not excluded.

d. On the other hand, on Macedonian sites as well as in the "seventh city" of Hissarlik, widespread and violent aggression by people of the Lausitz culture, from beyond the Middle Danube, is demonstrated, and is dated to the end of the twelfth century. As this aggression was transitory, and has not been traced farther south than the northeastern districts of Thessaly, there is no reason for identifying it with the "coming of the Dorians." It may, however, be provisionally regarded as the shock which dislodged from the Pindus highland, and perhaps also from Macedon, the northernmost of already Greek-speaking peoples. Some of these peoples were apparently so far habituated to Danubian customs, as to bring with them the characteristic spectacle-fibula and a few other Danubian elements. But allowance must also be made for a well established increase of rainfall during this and the following century, sufficient to depopulate these highlands and re-afforest them as a natural obstacle to further intrusion from the north. Probably the

intrusive "third culture" at Lianokladhi represents the material civilization of highlanders thus extruded, for its decorative art is a rendering, in old Thessalian technique, of the Late Mycenaean designs which had been slowly penetrating northern Greece and Macedonia during the period immediately preceding.

8. Traditions, dialect distribution, and intrusive fibulae combine to establish the main course of the "coming of the Dorians" and other "West-Greek" immigrants, as a converging movement toward Attica and the Isthmus region, and consequently to confirm the traditional account of the refugee colonies in the island-world and on the west coast of Asia Minor. The intensity of this converging pressure from the interior is demonstrated by the total disintegration of Mycenaean society and its material culture, almost everywhere except in Attica and in remote districts such as Crete and Cyprus.

a. The last task, therefore, is to account for the reassemblage of many heterogeneous elements:—(1) Mycenaean survivals, (2) North-Ægean contributions from the regions devastated and temporarily dominated by the Lausitz raiders, (3) indigenous arts acquired by the refugee colonists from "Carian" and other native peoples of western Asia Minor, inheritors of the disrupted Hatti culture, and (4) contributions from the secluded hybrid civilization of Cyprus, always a principal source of copper, and now probably also of iron;—into a composite culture and style, inevitably and inherently tolerant and receptive of novelties, but dominated more or less effectually by homogeneous principles of construction. In the absence, almost complete, of other contemporary evidence sufficiently copious to justify general conclusions, the decorative art of nascent Hellenism supplies a provisional clue, in the growth of the "geometric" style of deliberate composition. The geographical distribution of its earliest manifestations points clearly away from

the districts most completely dominated by the Dorian and West-Greek immigrants, and also away from the areas of refuge-settlement, Asiatic and insular. It points, as clearly, toward Attica, and—second only to this—to Boeotia and Argolis, which were less completely dominated by the newcomers than Laconia and most parts of the north country.

b. The validity of these conclusions from contemporary and approximately dated examples of the new decorative art is tested and, on the whole, confirmed by the characteristics and geographical distribution of Greek metrical rhythms; the counterpart, in literary composition, of the rhythmical ornament of painted vases. The structure and also the subjects of Hesiodic epic, and eventually of Attic tragedy and the prose histories of the fifth century, illustrate the same principles of aesthetic composition; analysis of a subject into its elements, classification, subordination, and rational reconstruction. These, in turn, throw some light on the constitutional structure and political institutions of the Greek city-states, which emerged as the characteristic, and also quite original, solution of the practical problems of "living well" in the chaotic and distressful circumstances of the migration period.

Similar analysis of the construction of Homeric epic,—in the supreme instance of the description of the "Shield of Achilles,"—shows the climax of a technique, simpler because still merely zonal or linear in its scope. This was inevitably superseded, when men realized the potentialities of spatial analysis, tectonic rhythms and proportions, and consequently the far higher types of composition, which are illustrated, in their origins, by the "geometric" style of early Athens.

The general conclusion is that the Greeks never wholly were "one people," but were ever in process of becoming; that they achieved such unity as they enjoyed in their "great age," under austere regional controls eliminating,

selecting, fostering qualities, faculties, and aspirations, in an originally diverse and heterogeneous population; and that in the last crisis it was this very diversity and chaotic intermixture which became the most potent stimulus in the struggle to "live well," and, through reasonable accommodation between social order and personal initiative, to achieve maturity, in a self-mastering freedom.

LIST OF ABBREVIATIONS OF TITLES OF BOOKS, PERIODICALS, ETC.

Abbreviations	Titles
Abh. bayr. Akad. Wiss.	Abhandlungen der bayerischen Akademie der Wissenschaften, Munich.
Abh. Berlin	Abhandlungen der preussischen Akademie der Wissenschaften zu Berlin.
Abh. k. sächs. Ges.	Abhandlungen der königlichen sächsischen Gesellschaft. Dresden.
Abh. Wien.	Abhandlungen der Kaiserlichen Akademie der Wissenschaften. Vienna.
Æg. Z.	*Zeitschrift für Ægyptische Sprache und Altertumskunde.* Berlin.
AfA	*Archiv für Anthropologie.* Brunswick.
AJA	*American Journal of Archaeology.* Washington.
AM	Mitteilungen des kaiserlich-deutschen archäologischen Instituts athenische Abteilung. Athens.
Am. J. Sem. Lang.	*American Journal of Semitic Languages and Literature.*
Anat. Studies	*Anatolian Studies* presented to Sir W. M. Ramsay, Manchester, 1923.
l'Anthr.	*L'Anthropologie.* Paris.
Archiv f. Relig. Wiss.	*Archiv für Religions-wissenschaft.* Freiburg-i-B.
ASA Rome	Atti della Societá Romana di Antropologia. Rome.
Baumeister	Baumeister, A. *Denkmäler des klassischen Altertums.* 3 vols. 1885–88.
BCH	*Bulletin des correspondances helléniques.* Athens.
Bernouilli	Bernouilli, J. J. *Griechische Ikonographie.* 2 vols. Munich, 1901.
BM Cat.	British Museum, *Catalogue of Vases* (London), I i (1925), ii (1912) etc.
BM Cat. T-C.	British Museum, *Catalogue of Terracottas.* 1903.
BM Exc. (*Cyprus, Eph. Carch.*)	British Museum, *Excavations in Cyprus* (London, 1900): *at Ephesus* (1908); *at Carchemish*, I. II. (1921).
Boisacq	Boisacq, E. *Dictionnaire étymologique de la langue grecque.* Paris, 1916.
Bosanquet, *Phylakopi*	Bosanquet, R. C. "The Obsidian Trade," *Journal of Hellenic Studies*, Supplement IV. London, 1904. Excavations in Phylakopi in Melos.
Bossert	Bossert, H. Th. *Alt-Kreta, Kunst und Handwerk . . . während der Bronzezeit.* Berlin, 1921, 1923.
BP It.	*Bulletino di Paletnologia Italiana.* Rome.
Breasted, *Ancient Records*	Breasted, J. *Ancient Records of Egypt.* 5 vols. Chicago, 1906.

BSA	*Annual of the British School at Athens*, London.
BSA Paris	Bulletin de la société d'anthropologie de Paris.
Buck, *Greek Dialects*	Buck, C. D. *Introduction to the Study of Greek Dialects.* Chicago, 1910.
Bull. BSA Jerusalem	Bulletin of the British School of Archaeology in Jerusalem. London. 1922–25.
CAH	*Cambridge Ancient History.* Edited by J. B. Bury, S. A. Cook, F. E. Adcock. 6 vols. Cambridge, 1923–.
Casson, *Macedonia*	Casson, S. *Macedonia, Thrace and Illyria.* Oxford, 1926.
Chantre, *Caucase*	Chantre, E. *Récherches anthropologiques dans le Caucase.* Paris, 1885–87.
Childe, *Aryans*	Childe, V. G. *The Aryans.* London, 1926.
Childe, *Dawn*	Childe, V. G. *The Dawn of European Civilization.* London, 1925.
Collignon, *Cat.*	Collignon, M., and Couve, L. *Catalogue des vases peints du Musée National d'Athènes.* Paris, 1904.
CR. CQ.	*Classical Review. Classical Quarterly.* London.
Dugas, *Céramique*	Dugas, C. *La Céramique des Cyclades.* Paris, 1925.
Eph.	*Ephemeris Arkhaiologike.* Athens.
Evans, *Palace*	Evans, Sir A. J. *The Palace of Minos.* London, 1921.
Evans, *Scripta*	Evans, Sir A. J. *Scripta Minoa.* Oxford, 1912, I.
Fimmen	Fimmen, D. *Die Kretisch-Mykenische Kultur.* Leipzig, 1921.
Frankfort, *Studies*	Frankfort, H. *Studies in Early Pottery of the Near East.* I (1924), II (1927). (Royal Anthropological Institute, London, Occasional Papers 6 and 8.)
F-Reichhold	Furtwängler, A. and Reichhold. *Griechische Vasenmalerei.* Munich, 1901.
van Gennep	Gennep, A. van. *Études d'ethnographie algérienne.* Paris, 1911.
Genouillac, *Cér. Capp.*	Genouillac, H. de. *Céramique cappadocienne.* Paris, 1926.
Gerhard, *AV*	Gerhard. *Auserlesene Vasenbilder.* Berlin, 1840–50.
Glotz	Glotz, G. *La civilisation égéenne.* Paris, 1923.
Gött. Gel. Anz.	*Göttingen Gelehrter Anzeiger.* Göttingen.
Hall, *Anc. Hist.*	Hall, H. R. *Ancient History of the Near East.* London, 1913.
Harrison, *Prolegomena*	Harrison, J. E. *Prolegomena to Greek Religion*, ed. 2. Cambridge, 1907. (When 1903 edition is used it is so noted.)
Helbig, *Epos*	Helbig, W. *Das Homerische Epos aus den Denkmälern erläutert*, ed. 2. Leipzig, 1886.
H-M	Harrison, J. E. and MacColl, D. S. *Greek Vase Paintings.* London, 1894.

Hoernes, *Urg. Kunst*	Hoernes, M. *Urgeschichte der bildende Kunst in Europa.* Vienna, 1925 (1898 edition once referred to and noted as such).
Jahrb. d. Inst.	Jahrbuch des deutschen archäologischen Instituts. Berlin.
JHS	*Journal of Hellenic Studies.* London.
Jour. Eg. Arch.	*Journal of Egyptian Archaeology.* London.
JRAI	*Journal of the Royal Anthropological Institute.* London.
J. R. Asiatic Soc.	*Journal of the Royal Asiatic Society.* London.
Kavvadias, *Proist. Arch.*	Kavvadias, P. *Proistoriké Arkhaiologia.* Athens, 1909.
K. Danske Vid. Selsk. (*histfil*)	Det Kgl. Danske Videnskabernes Selskab. Historisk-filologiske Meddelelser. Copenhagen.
Koerte, *Gordion*	Koerte, G. and A. *Gordion*, Jahrbuch d. k. Arch. Inst. Berlin, Erganzungsheft V (1904).
Kretschmer, *Einleitung*	Kretschmer, P. *Einleitung in die Geschichte der griechischen Sprache.* Göttingen, 1896.
Louvre Cat. (page ref^ce)	Pottier, E. *Catalogue des vases antiques du Louvre.* Paris, 1896.
Louvre Cat. (vase number)	Pottier, E. *Vases antiques du Louvre*, I. Paris, 1897.
Macalister, *Gezer*	Macalister, R. A. S. *The Excavations at Gezer.* 3 vols. London, 1912.
Macalister, *Exc.*	Macalister, R. A. S., and Bliss, F. J. *Excavations in Palestine.* London, 1902.
MAG Wien	Mitteilungen der anthropologischen Gesellschaft. Wien.
MDOG	Mitteilungen der deutschen Orient-Gesellschaft.
Meillet, *Aperçu*	Meillet, A. *Aperçu de l'histoire de la langue grecque.* Paris, 1920.
Mém. Acad. Inscr.	Mémoires de l'academie des inscriptions. Paris.
Mém. Soc. Antiq. du Nord	Mémoires de la société des antiquaires du Nord. Copenhagen.
Millingen	Millin and Millingen. *Peintures des vases grecs* (ed. Reinach). Paris, 1891.
Minns	Minns, E. H. *Scythians and Greeks.* Cambridge, 1913.
Mitt. geogr. Ges. Hamburg	Mitteilungen der geographischen Gesellschaft zu Hamburg.
Mon. Ant.	Monumenti antichi publicati per cura dell'Accademia dei Lincei. Rome.
Monatsb. Berl. Ak. Wiss.	Monatsberichte der berliner Akademie der Wissenschaften.
Mon. Inst.	Monumenti dell'Instituto Archaeologico di Roma.
Müller, *AuE*	Müller, W. Max. *Asien und Europa.* Leipzig, 1893.
Myres, *Anthr. Class.*	Myres, J. L. *Anthropology and the Classics.* Oxford, 1908.
Myres, *Cesn. Hdbk.*	Myres, J. L. *Handbook to the Cesnola Collection of Antiquities from Cyprus.* New York, 1915.
Myres, *Dawn*	Myres, J. L. *The Dawn of History.* London, 1912.

Myres, *Greek Lands*	Myres, J. L. *Greek Lands and the Greek People.* Oxford, 1910.
Myres, *Political Ideas*	Myres, J. L. *The Political Ideas of the Greeks.* New York, 1927.
Myres and Ohnefalsch-Richter, *CMC*	Myres and Ohnefalsch-Richter, M. *Catalogue of the Cyprus Museum.* Oxford, 1899.
Ohnefalsch-Richter, *KBH*	Ohnefalsch-Richter, M. *Kypros, the Bible and Homer.* Berlin, 1893.
Pauly-Wissowa	Real-Encyclopädie der klassischen Altertumwissenschaft. Stuttgart (1893–).
Pausanias	Frazer, Sir J. G. *Pausanias.* 6 vols. London, 1898.
P-C, iii. v. vi. etc.	Perrot, G., and Chipiez, C. *Histoire de l'art dans l'antiquité,* III (1885), V (1892), VI (1894), etc.
Peet, *Stone and Bronze Ages*	Peet, T. E. *The Stone and Bronze Ages in Italy.* Oxford, 1909.
PEFQS	Palestine Exploration Fund, *Quarterly Statement.* London.
PEF Annual	Palestine Exploration Fund, *Annual.* London.
Persson, *Asine*	Persson, A. W. *Bulletin de la société royale de lettres de Lund.* "Reports on excavations at Asine in Argolis," 1922–23.
Pfuhl	Pfuhl, E. *Die Anfänge der griechischen Bildniskunst.* Munich, 1927.
Pottier, *Douris*	Pottier, E. *Douris,* ed. 2, Paris (and E. T., London), 1909.
Poulsen, *Der Orient Dipylon*	Poulsen, F. *Der Orient und die fruh-griechische Kunst.* Leipzig, 1912. *Die Dipylon Gräber und die Dipylon Vasen.* Leipzig, 1905.
Pr. Z.	*Praehistorische Zeitschrift.* Berlin.
Proc. BA	Proceedings of the British Association for the Advancement of Science, London.
PSBA	Proceedings of the Society of Biblical Archaeology. London.
Randall-MacIver, *Iron Age; Villanovans*	Randall-MacIver, D. *The Iron Age in Italy.* Oxford, 1927. *Villanovans and Early Etruscans,* 1924.
R. Anthr.	*Révue d'anthropologie.* Paris.
Reichel	Reichel, W. *Ueber Homerischen Waffen.* Vienna, 1894: also ed. 2, 1901.
Rév. Arch.	*Révue archéologique.* Paris.
de Ridder, *Bibl. Nat.*	Ridder, J. de. *Catalogue des vases grecs de la Bibliothèque Nationale.* Paris, 1902.
Ridgeway, *EAG.*	Ridgeway, W. *The Early Age of Greece.* I. Cambridge, 1901.
Ripley, *Races*	Ripley, W. Z. *The Races of Europe.* London, 1900.
Riv.	*Rivista di Antropologia.* Rome.

Rodenwaldt, *Fries*	Rodenwaldt, G. *Der Fries des Megaron von Mykenai.* Halle, 1921.
Rodenwalt, *Tiryns*	Rodenwaldt, G. *Tiryns*, II, 1912.
Rose, *Prim. Cult.*	Rose, H. J. *Primitive Culture in Greece.* London, 1925.
Rostovtseff, *History*	Rostovtseff, M. *A History of the Ancient World*, I (1926), II (1927). Oxford.
Rostovtseff, *Iranians*	Rostovtseff, M. *Iranians and Greeks in South Russia.* Oxford, 1922.
Schl.	Schmidt, H. *Heinrich Schliemann's Sammlung Trojanischen Altertümer.* Berlin, 1902.
Sitz. Berlin	Sitzungsberichte der k. preuss. Akad. d. Wissenschaften zu Berlin.
Trans. Soc. Bibl. Arch.	Transactions of the Society of Biblical Archaeology. London.
VGA Berlin	Verhandlungen der berl. Gesellschaft für Anthropologie. Berlin.
Wace and Thompson, *Nomads*	Wace, A. J. B., and Thompson, M. S. *The Nomads of the Balkans.* London, 1914.
Wace and Thompson, *Pr. Th.*	Wace, A. J. B., and Thompson, M. S. *Prehistoric Thessaly.* Cambridge, 1912.
Xanthoudides, *Vaulted Tombs*	Xanthoudides, S. *The Vaulted Tombs of the Mesara*, translated by J. P. Droop. Liverpool, 1924.
ZDMG	*Zeitschrift der deutschen morgenländischen Gesellschaft.*
ZfE	*Zeitschrift für Ethnologie.*
ZfMA	*Zeitschrift für Morphologie und Anthropologie.*

NOTES

Notes to Introduction

1. For details see A. Michaelis, *Archaeological Discoveries in the Nineteenth Century* (London, 1908); G. P. Gooch, *History and Historians of the Nineteenth Century* (London, 1913), especially ch. xxix; K. J. Neumann, *Entwicklung und Aufgaben der alten Geschichte* (Strassburg, 1910).

2. I have dealt at greater length with these topics in my Bennett Lectures on *The Political Ideas of the Greeks* (New York, 1927).

3. Herodotus, viii. 144; Thucydides, i. 6. For other examples see E. E. Sikes, *The Anthropology of the Greeks* (London, 1914), 69–89, and my chapter on Herodotus in *Anthropology and the Classics* (Oxford, 1908), 121–168.

4. Phoenicians in early Greece: Herodotus, i. 2; v. 58; "Children of the Sun" Diodorus, v. 56–57.

5. Herodotus, i. 56–57; Thucydides, i. 2. 12.

6. Herodotus, i. 56–57; vii. 95.

7. For numerous examples see Sir J. G. Frazer, *Pausanias* (London, 1898), index s. v. *Pelasgi;* a "Pelasgian wall" at Athens, Herodotus, v. 64.

8. Pelasgian religious beliefs and customs, Herodotus, ii. 50–52; an Athenian family worshiping a "Carian" Zeus, v. 66.

9. Herodotus, i. 57, Pelasgians in Macedonia and on the Hellespont, mutually intelligible.

10. For the growth of this "Pelasgian Theory" see Myres, *JHS*, xxvii. 170–225.

11. Pelops, Thucydides, i. 9; Cadmus, Herodotus, ii. 44–49, 145; iv. 147; v. 57–59; Cyclopes at Tiryns, Pausanias, ii. 25.7; at Mycenae, ii. 16. 5.

12. See Chapter VI. Herodotus, ii. 145, however, dated Cadmus sixteen hundred years before his own time, i.e., before 2000 B.C.

13. The threefold classification appears first in Hesiod, fr. 8, and is applied by Herodotus, i. 6; i. 141–51, to the Asiatic cities; in peninsular Greece he distinguishes Ionian and Dorian only, i. 56, but notes "Achaean" alongside "Arcadian" aboriginals in Peloponnese, viii. 73.

14. The association of "Achaean" with "Ionian" appears first in Hellanicus fr. 10. In Homer, Æolus, father of the Æolid families discussed in Chapter VI, is quite distinct from Æolus the "variable" (*aiolos*) wind god. For "blond" Dorians (*xanthoi*), see Pindar, *Nem.* ix. 40, and Chapter IV. n. 66.

15. Herodotus, ii. 53.

16. Herodotus, v. 66.

17. Thucydides i. 144, and as Athens for Pericles was (ii. 41) an "education for Greece," so Greeks in general regarded their achievements as an education for mankind; even their "greatest of wars till now" with all its tragedy was, for Thucydides, to be a "possession for evermore," in his record of it.

18. Euripides, *Medea*, 536–41: his foreign wife (Jason argues) has exchanged barbarism and a rule of force, for Hellenic justice and social order; here, her natural abilities have scope; if she had lived her life at the back of beyond, no one would ever have heard of her.

19. Aristotle, *Politics*, vii. 10. 14 (1330 *a* 33) "it is better (cf. *Œconomics*, i. 6, "both just and convenient") for all slaves to have their freedom in prospect as a prize."

Notes to Chapter I

1. V. Bérard, *Les Phéniciens et l'Odyssée* (Paris, 1902), I, 68–79, emphasizes the significance of such establishments whenever the risks of sea voyages were greater than those of what in this general sense he calls "isthmus" routes.

2. R. C. Bosanquet, *The Obsidian Trade* in *JHS*, Suppl. IV. *Excavations at Phylakopi in Melos* (London, 1904), chap viii, pp. 216–33.

3. I owe this information to Sir Arthur Evans.

4. Herodotus, i. 142.

5. In sandy soils, and in some limestone districts, there are conifers down to sea level, ranking with other evergreens; the "maritime pine" and the cypresses corresponding with the "Monterey pine" of the same climatic régime in California.

6. The Greek *diaita*, which gives us our word "diet," was used almost as a synonym for *bios* to denote that "life in accordance with reason" which distinguishes Man, wherever found, from other animals. The first formal classification of food-quests is that of Aristotle, *Politics*, i. 11. 1258 *b* 10–34, but before him, Herodotus and Hippocrates appreciated the significance of "diet" as one of the conditions for "culture"; see J. L. Myres in *Anthropology and the Classics* (Oxford, 1908), 144–49.

7. Herodotus, i. 142.

8. When I saw this district in 1916, the myrtles and other shrubs were already five or six feet high, and fresh humus was forming.

9. Plato, *Critias*, 110–11; cf. A. Platt, *Journal of Philology*, xviii. (1890) 134 ff.

10. *Odyssey*, xxiv. 234, 336–45; xix. 204–6.

11. *Odyssey*, vi. 4–10; vii. 112–33.

12. Chapter VIII, especially p. 503.

13. Shelley's translation of Euripides, *Cyclops*, 57–58. Aristotle, *Politics*, i. 8. 1256 *a* 35 "farming a living farm."

14. Herodotus, v. 29.

15. Herodotus, v. 49. The speaker is Aristagoras of Miletus.

16. Cyclopes, "round-eyed" men, Homer, *Odyssey*, vi. 5; "nut-eating" men, Alcaeus fr. 91; Herodotus, i. 66; "meal-eating," Sophocles, *Philoctetes*, 709 (which preserves the meaning which commentators have denied to *Odyssey*, i. 349, vi. 8, xiii. 261); "articulate-speaking," *Iliad*, ii. 285; "babbling," ii. 867; "screaming like cranes," iii. 2–7.

17. Herodotus, iv. 23 (Argippaei); 61 (treeless Scythia).

18. Herodotus, viii. 144.

Notes to Chapter II

1. A complete bibliography to 1899 is in W. Z. Ripley, *The Races of Europe* (London, 1900).

2. G. Nicolucci, *Atti dell'Acad. delle Sc. di Napoli*, iii. 23 (1867), 1–98: J. Beddoe, *The Anthropological History of Europe* (Paisley, 1893): S. Zabarowski, *BSA Paris* (1881), 234–38: R. Virchow, *Abh. Berlin* (1882); Theodore Bent, *JHS* v. 59: Klon Stephanos, art. "Grèce" *in* Delhambre *Dict. encycl. des sciences médicales* (Paris, 1884), x. 452; *C. R. Congrès Int. Archéol. Athènes* (1905), 216.

3. Luschan, *AfA* xix. 31–53: E. Chantre, *Récherches anthrop. dans le Caucase* (Paris, 1885–87): *Congrès Int. Anthrop. Moscow* (1893), ii. 43–56, 77–90: Neophytos, *l'Anthr.* ii. 25–35: Virchow, *Sitz. Berlin* (1893), 677–700.

4. G. Sergi, *ASA Rome*, i. 231–52 (Russian and Mediterranean types): *The Mediterranean Race*, London, 1901: Zampa, *ZfE*, xviii. 167–93, 201–32; *R. Anthr.*, III, i. 625–47: Ripley, *Races*, 406–11. But J. Deniker, *Ass. française p. l'avancement des sciences* (1897); *The Races of Man* (London, 1900), 347, notes both the scarcity of evidence and the apparent prevalence of broad-headed types in ancient Greece.

5. W. Ridgeway, *JRAI*, xvi. 77 ff.; *The Early Age of Greece* (Cambridge, 1901), i. (especially ch. iv): Ripley, *Races*, 407. On "Alpine" types in Greek lands, Myres, *CR* xvi. 71 and Ridgeway's reply, 82.

6. Sergi, *AJA*, v. 315–16: Boyd Dawkins, *BSA*, vii. 150–55 Pl. vi.: Duckworth, *BSA*, ix. 340–55; *Proc. BA* (1903), 404; *ZfMA*, xiii. 439: Hawes, *Proc. BA* (1905), 208; *BSA*, xvi. 258–80; supplementary reports in *Proc. BA* (1908, 1909, 1910, 1912): Luschan, *ZfE*, xlv. 307; Nelde, *ZfE*, xliv. 845: J. L. Myres, *Proc. BA* (1906), 700–1; *The Dawn of History* (London, 1912), 40: A. Mosso, *Escursioni nel Mediterraneo* (Rome, 1907), 275–76: Pittard, *Archives suisses d'anthropologie générale* (Geneva, 1914), i. 7–36: Buxton, *Biometrika*, xiii. 92–112 (with bibliography); *JRAI*, l (1920), 183–295.

7. The spread of "Alpine" man may be illustrated by comparing the actual distribution of the hardier and less hardy trees: the oriental plane, for example, though plentiful from the Persian foothills to the Bosporus, does not grow wild in Europe: the wild fig, less widely distributed now to the southeast, has occupied Thrace, Macedonia, and the Greek peninsula; the "Spanish" chestnut ranges from Armenia to the Pyrenees and the south of England; the oaks, though they have never occupied the high Alps, have reached Scandinavia, and are competing with Siberian species along a frontier in the longitude of Moscow. Among the conifers similarly *Picea excelsa* from peninsular Europe is intermixed in the Russian forest with the Siberian *Picea obovata*.

It was the confluence of these distinct forest régimes which encircled the loess-covered steppe and made it an asylum, and then a reservoir, of the descendants of the older population of western Eurasia, as described in the text (p. 39).

8. First recognized by Schliz, *Pr. Z.*, iv. 36.

9. G. Murgoci in *Postglaziale Veränderungen* (Stockholm, 1910), 153–65: *Les zones naturales des sols en Roumanie* in *Rév. du Pétrole* (Bucarest, 1911), Nos. 6, 7.

10. E. Brückner, *Klima-schwankungen seit 1700* (Vienna, 1890): Ellsworth Huntington, *The Pulse of Asia* (Boston and New York, 1907): C. E. P. Brooks, *Climate through the Ages* (London, 1926), summary and criticism.

11. Bogdanof's life-work of research in this field is summarized in Ripley's *Races*, 352–55: later discoveries, in E. H. Minns, *Scythians and Greeks* (Cambridge, 1911), and in V. G. Childe, *The Dawn of European Civilization* (London, 1925), ch. x; *The Aryans* (London, 1926), ch. viii.

12. Pittard, *Bull. Soc. Sci., Bucarest*, (1904), xii. 365 (Cucuteni); Rosinski, *Wiadómosci Archeologiczne*, Warsaw, ix 1924–25, (E. Galicia); Childe, *Dawn*, 318 (N. Bulgaria). I am indebted for these references, and unpublished information, to Professor Childe.

13. For the "painted-ware" culture, see the summaries of Minns and Childe (*Dawn*, chap. 11): for the later history of the "kurgan" folk, M. Rostovtseff, *Iranians and Greeks in South Russia* (Oxford, 1922).

14. Luschan, *AfA*, xix. 43 (Limyra); Virchow, *Abh. Berlin*, 1882 (Hissarlik).

15. Velde, *ZfE*, xliv. 845 ff.

16. Schiff, *ZfE*, xlvi. 14. At Meligalá on the borders of Arcadia and Messenia thirty-three men registered an average of 82.49: in Mani, a peculiarly secluded district, ninety-nine men registered 79.92.

17. Klon Stephanos, *CR Congrès Int. Archéol.* (Athens, 1905), 216.

18. Duckworth, *Proc. BA* (1903), 404; *BSA* ix. 344.

19. Duckworth, *Proc. BA* (1903), 407 (Palaikastro). For other sites, S. Xanthoudides, *The Vaulted Tombs of the Mesará* (translated by J. P. Droop, Liverpool, 1924), 126–28 pl. lix.

20. Ripley, *Races*, 427. Conversely in modern Crete the women are rather broader-headed (82.9) than the men (80 and 77.8), to judge from small series quoted by L. H. D. Buxton, *Biometrika*, xiii. 99.

21. Hawes, *Proc. BA* (1910), 228.

22. Velde, *ZfE*, xliv. 845 ff.

23. All conclusions as to Argolis must however be quite provisional, in view of the copious material recently collected by the Swedish excavators from Minoan tombs at Asine, but not yet ready for publication.

24. Virchow, *Sitz. Berlin* (1893), 680–81.

25. Ornstein, *VGA Berlin* (1879), 305–6. But Weisbach, *MAG Wien*, xi. 72–97, records only 4 per cent of "more or less light" hair. See also E. Pittard, *Archives Suisses d'Anthrop. Générale*, Geneva, I (1914), 28–32.

26. Childe, *Dawn*, 318.

27. Virchow, *Abh. Berlin* (1882).

28. Virchow's observations are discussed in great detail by Peake, *JRAI* xlvi. 154.

29. Preliminary treatment of this topic will be found in my inaugural lecture, *Greek Lands and the Greek People* (Oxford, 1910).

30. As has been noted already (n. 8), Schliz regarded these early Italian long-heads as emigrants from the loess-lands of the Upper Danube; and there is indeed so little material from central Italy that it is difficult to prove continuity between

Remedello and the south. But the culture of Remedello belongs essentially to the western Mediterranean, and to a period when there is no other evidence that the trans-Alpine passes were in use.

31. Sir Arthur Keith, *Report on the Galilee Skull* in *Researches in Prehistoric Galilee*, Memoirs of the British School of Archaeology in Jerusalem (London, 1927). Mr. L. H. D. Buxton, excavating Bronze-Age tombs with me in Cyprus in 1913, found along with normal local varieties a primitive-looking type, and has since recognized similar skulls in Egypt and Syria (cf. W. L. H. Duckworth. *Studies from the Anthropological Laboratory* [Cambridge, 1904, 203–11]): he hopes to publish his material, and meanwhile writes to me that he regards these skulls as "traces of a primitive stock, probably widely diffused"; and recalls Huxley's recognition of an "Australioid" type in Egypt.

32. Buxton, Langdon, *Excavations at Kish* (Paris, 1924), i. 115.

33. H. Günther, *Rassenkunde des deutschen Volks*, 124.

34. G. Elliot Smith, *The Ancient Egyptians* (London, 1923), cf. 81 (map).

35. R. A. S. Macalister, *Excavations at Gezer* (London, 1912), i. 58–59. His curve for "pre-Semitic" skulls shows peaks at 73 and 78, and smaller peaks at 69 and 82. For Syrian brachycephaly (whereas Bedawin are long-headed), W. L. H. Duckworth, *Studies* (Cambridge, 1904), 203–11. G. Elliot Smith, *The Ancient Egyptians* (1923), 150–52, thought broadheads intruded early among longheads.

36. *Genesis*, xiii. 6.

37. *Leviticus*, xix. 19. For pre-Semitic worship, Macalister, *Gezer*, i. 92: E. Sellin, *Tell Ta'annek* (Vienna, 1904), 69–75.

38. For a remarkable instance of this interdependence of craftmanship and social order, see R. Maunier, *La Construction Collective de la Maison en Kabylie* (Travaux de l'Institut d'Ethnologie) Paris, 1926.

39. For examples see Myres, *Anthr. Class.*, 121–168.

40. Deniker, *Races*, 331–32; *JRAI*, xxxiv. 182–202.

41. H. J. E. Peake, *The Bronze Age and the Celtic World* (London, 1922, especially 56–60, 108–11) presents this view more cautiously than most of its advocates: contrast for example W. J. Perry, "The Geographical Distribution of Megalithic Monuments and Gold Mines," *Mem. Proc. Lit. and Phil. Soc. Manchester*, lx (1915).

42. Taramelli, *Mon. Ant.*, xix. 533; *BP It.* xxxix. 100 ff.; *Riv.*, xx. 10 ff.: Giuffrida-Ruggieri, *Arch. per Anthrop. ed Etnol.* xlvi. (Angelu-Ruju).

43. *Iliad*, ii. 219. Thersites is represented on a fifth-century vase, British Museum E 196. Was it a similar head form "like a squill" that Pericles concealed so carefully? Plutarch, *Pericles* 3.

44. Bald men in Attic vase-painting:—*BM Cat* E 71 (A. S. Murray, *Designs from Greek Vases* [London, 1894], 27, 44, 53); *Louvre Cat.*, G 152, 154–55, 220, 318, 364, 372, 378, 382 (all figured in Pottier, *Cat. III*); *Bibl. Nat.*, 846; Harrison and MacColl, *Greek Vase Paintings* (London, 1894), xii. xiii. 2.

45. Schoolmaster vase (Berlin) Pottier, *Douris* (E. T., London, 1909), fig. 23.

46. Bald giants:—*BM Cat.* E 48; *Louvre Cat.*, G 126, 229; Pottier, *Douris* fig. 11; H-M, xxiv; *JHS* xxx. pl. 2; Millin and Millingen, *Peintures de Vases Grecs* (Paris, 1891), pl. ix; Gerhard, *Auserlesene Vasenbilder* (Berlin, 1840–58), 115.

Centaurs:—Gardner, *JHS*, xvii. 294, pl. vi.; Furtwängler and Reichhold, *Griechische Vasenmalerei* (Munich, 1900), 86; Munich 168 (H-M xxxix); *Bibl. Nat.* 913. Silenus and Satyrs:—*BM Cat.*, E 31, 66, 387, 505, 570; *Louvre Cat.*, G 425–26, 448–49, 460, 481, 497 (H-M xxxi); Pottier, *Douris* figs. 14, 15; H-M ix. 2, xxxvi. River god:—*WV*, D 6 (*Enc. Brit.* s. v. *Greek Art*, fig. 16); *Bibl. Nat.* 697 (H-M xxxviii).

47. Low-class types: *BM Cat.*, D 7 (*White Athenian Vases*, pl. 18 B). Actors Perrot-Chipiez, *Histoire de l'Ant.*, vi. 318, fig. 118; Milligen, pl. 46; Baumeister, *Denkmäler des Klassischen Altertums*, 1885–88, fig. 903 (1826–30); Charon: F.-Reizler, 26, 27, 44, 80, 82. Pug-nosed slave and Hellenic mistress. R. C. Bosanquet, *JHS* xix. 173, 176–77, pl. 3. Satyrs, feckless and useless, Hesiod fr. 28 (94) quoted Strabo 471.

48. "High" and "heroic" types, Pottier, *Douris*, 2, 21, 25. F-Reichhoid, 36 (54) shows extreme brachycephaly with snub nose, contrasted with normal profile, cf. *JHS*, xix. pl. 3; Gerhard, *AV* 327. Other normal types: *WV*, x. 48 m (*Enc. Brit.*, *Greek Art*, fig. 15). The prominent nose is usual until the early fifth century and never quite disappears, though the "Greek profile" then becomes a tiresome mannerism in the less careful drawings. Greek skulls from Attica. Buxton, *Biometrika*, xiii. pl. iii. 1–2, 5–6.

49. Portraits of Socrates:—Plato, *Symposium*, 215: *Theaetetus*, 209: *Phaedo*, 117: Xenophon, *Symp.*, iv. 19; v. 5–7: Aristophanes, *Clouds*, 146: R. Delbrück *Antike Porträts*, (Berlin, 1912): J. J. Bernouilli, *Griechische Ikonographie* (Munich, 1901), i. 184–199. Rostovtseff, *History*, lxxiv. 4.

50. Greek and Persian stature:—Herodotus, i. 139; Xenophon, *Anabasis*, iii. 2. 25.

51. Ridgeway, *EAG*, i. 304.

52. For example, the faience votaries from the Temple-Repository at Cnossus, Sir A. J. Evans, *The Palace of Minos* (London, 1921), i. frontispiece. Bossert, 103–6.

53. Evans, *Palace*, 45; D. G. Hogarth, *Essays in Ægean Archaeology* (Oxford, 1927), 55, pls. viii, ix (Ægean), x (Egypt).

54. Reinach, *l'Anthr.* (1894–95); M. Hoernes, *Urgeschichte der bildende Kunst in Europa* (Vienna, 1898), 206 ff., pls. iii–iv (1925), 318, figs. 1–4.

55. Maltese figures, A. Mayr, "Vorgeschichtliche Denkmäler von Malta," *Abh. bayr. Akad. Wiss.* (1901), xxi. (iii.), 645–726, especially 700: *Die Insel Malta im Altertum* (Munich, 1909), 45–49, figs. 9–17: Hoernes (1925), 209, 211.

56. *CAH* pls. I 70; G. Contenau, *La Déesse Nue Babylonienne* (Paris, 1904).

57. Pre-bred Greek hair was "gently curled" (see ch. iv., n. 71 below): "woolly" hair, however, caused remark—*Odyssey*, xix. 246: Herodotus, ii. 104 (in Colchis): Plutarch, *Cimon*, 5.

58. Early bearded figures, Egyptian and Mediterranean, Sir W. M. F. Petrie, *Prehistoric Egypt*, pl. II. 23: Sir A. J. Evans, *Huxley Lecture*, figs. 14–16; H. Frankfort, *Studies in Early Pottery of the Near East* (R. A. I. Occasional Papers 6 and 8, London, 1927), ii. 95 (references).

59. Evans, *Palace*, i. fig. 201*ab.*; *Scripta Minoa*, (Oxford, 1912), i. figs. 123–25: Bossert, 326 e.g.: compare R. B. Seager, *Mochlos* (Boston, 1912), 49, fig. 21:

Bossert, 107–8; 322d (gem from Phaestus: full face) with the profile of the marble head from Amorgos, Bossert, 22, 23, and the clay head (B. 21). Woman's head from Mycenae (B. 223).

60. Delbrück, *Porträts*, Seleucus Nicator, pl. XXII.; Ptolemy Soter, pl. XXIII, cf. M. Rostovtseff, *A History of the Ancient World* (Oxford, 1926), i, pl. LXXXII 2, pl. LXXXIV *a*.

61. For example the leader of the procession on the "Harvester-vase" from Agia Triada, Bossert, 94.

62. Cup inlaid with bearded heads, Bossert 282–84: P–C, vi. fig. 241.

63. Gold masks, Bossert 252: P-C, vi. fig. 371 (clean shaven): Bossert 253–4, P-C, vi. fig. 372 (moustache only): P-C, vi. fig. 373 (beard). On the wearing of moustache and beard, G. Elliot Smith, *The Ancient Egyptians* (London, 1923), 98–99, 137, 154.

64. Forsdyke, *JHS*, xl. 174, pl. 6; Bossert, 120–21.

65. Warrior-Vase:—Bossert, 265–66: C. Schuchhardt, *Schliemann's Excavations* (E. T., London, 1891), 280, figs. 284–85. Aristonophos Vase:—*Mon. Inst.* viii. pl. IV. W. Helbig, *Das Homerisches Epos aus den Denkmälern erläutert* (Leipzig, 1886), 252, fig. 89. Melian amphora (Apollo):—F. Conze, *Melische Thongefässe* (1862) pl. IV: Helbig, *Epos*, 239, fig. 72.

66. Busiris Vase:—*BM Cat.*, E 38; F-Reichhold, pl. LI; Rostovtseff, *History*, i. pl. LX 2; *CAH* pls. I 382*a*, *b*.

67. Dolon Vase: *BM Cat.*, F 157: Baumeister, fig. 505.

68. Tragic actor, *Mon. Inst.*, viii. 10.

69. Comic actors, O. Rayet and M. Collignon, *Hist. Céramique Grecque* (Paris, 1888), 318 fig. 118: and note 47 above.

70. See note 46 above.

71. Persian type:—*Louvre Cat.*, G 117: Pottier, *Douris*, fig. 20: *WV*, vii. pl. III.

72. See note 49 above. Remarkable Satyric types among Egyptian representations of prisoners of war (from Syria or Cilicia). E. Meyer, *Gesch. d. Altertums*, II. 1, Gotha, 1928,[2] pl. I.

73. See notes 46 and 47 above. The horrible figure of "Old Age" (*Louvre Cat.*, G 234) is a microcephalic idiot. On the other hand the peasant woman in the Metropolitan Museum, New York, is no outcaste; Rostovtseff, *History*, lxxxviii. 2.

74. Cnossian ladies, Bossert, 57, 60–62.

75. Glazed cups from Cyprus. *BM Exc. Cyprus* (1900), pl. III, fig. 61.

76. The "Parisienne," Bossert, 56; Agia Triada sarcophagus, 72–74; Mycenae stucco, 249; Tiryns fresco, 211. Cupbearer, 59; Spata ivories, 226–27.

77. Faience votaries, Bossert, 103–6; Boston ivory, 117–19; Berlin bronze, 131–32. The male equivalent is the corpulent bronze from Tylissos, Bossert, 155.

78. G. Glotz. *La Civilisation Egéenne* (Paris, 1923), 77.

79. Wace, *Burlington Magazine* (London, Nov.-Dec., 1914), and introduction to Burlington Club *Catalogue of Greek Embroideries* (London, 1914).

80. In 1917–18 it was my duty to supervise civilian travel in Greek waters and consequently to study the faces of many thousands of Greeks in relation to their abodes and destinations. Of the vivid impressions of regional types thus

acquired I have said what seemed at the moment discreet in an address to the Anglo-Hellenic League, published in its *Report No. 39* (London, 1919); see especially pp. 5–7.

81. The "Parisienne," Bossert, 56; the "Lady of Tiryns," 211; the "Cupbearer," 59. Kampos boxer, 250–51. Compare the Cretan athletes, 139, 141–42, and the Dictaean bronze head, 129. Tiryns youths, 216–17, compare the grooms from Mycenae, Wace, *BSA*, xxv (1921), pl. xxvii: Rostovtseff, *History* i. pl. LVI 3; a classical portrait of this type, Bernouilli, i. pl. VII.

82. Myres, *Handbook to the Cesnola Collection of Antiquities from Cyprus* (New York, 1915), Nos. 1096, 1266, 1267, 1281.

83. Spartan caricatures, Dawkins, *BSA*, xii. 324 ff., fig. 4; 338, pls. XI, XII: xiv. 15.

84. Unpublished photographs in Hellenic Society's library, London.

85. Demosthenes:—Bernouilli, ii. 76–77: E. Pfuhl, *Die Anfänge der griesch-ischen Bildniskunst* (Munich, 1927), pl. IX, 1, 2: Casson, *JHS*, xlvi. 72, pl. V: Rostovtseff, *History*, i. pl. LXXIX, 3.

86. The bearded head on Philip's coins is commonly attributed to Zeus: but if Zeus at all, it has been humanized into the portrait of a Macedonian; as the coin portraits of Alexander have no doubt been deified into an Apollo or a young Heracles. And there are admitted portraits on coins as early as those of Philip. G. F. Hill, *Select Greek Coins* (Paris, 1927), pl. VII 5 (Greek "low type"); VII 3 (Persian nobleman).

87. Alexander: Bernouilli, *Die erhaltene Darstellungen Alexanders des Grossen* (Munich, 1905).

88. For example, von Luschan, "The Early Inhabitants of Western Asia," *JRAI*, xli (1911), pl. xxix (lower half: from Tenos).

Notes to Chapter III

1. Herodotus, i. 142. (1) Miletus, Myus, and Priene, on the Carian coast; (2) six cities on the Lydian coast, from Ephesus to Phocaea; (3) Chios and its mainland neighbor Erythrae; (4) Samos. These are the twelve constituent states of the old Pan-Ionian league: of the Ionian-speaking cities in the Cyclades and Euboea, and of Attica, he takes no account.

2. The best recent summaries of results in Greek philology are—P. Giles, *Greek Language*, in *Encyl. Brit.* (London, 1910), and (with R. A. Neil) *Companion to Greek Studies* (Cambridge, 1916), §viii. 1: A. Meillet, *Aperçu d'une Histoire de la Langue Grecque* (Paris, 1920): F. Bechtel, *Die griechische Dialekte*, 3 vols. (Berlin, 1921–23): C. D. Buck, *Introduction to the Study of Greek Dialects* (1910), and *Classical Philology*, 1926, 1 ff.

3. For example Strabo, 333. Ridgeway's acceptance of this statement (*EAG*, 130) vitiates the whole of his argument (p. 660), as his acceptance (p. 194) of Strabo's recognition of Carian as some sort of Greek vitiates his notions about western Asia.

4. For the Greek dialects, see A. Thumb, *Handbuch der griechischen Dialekte*, (Heidelberg, 1909), bibliography; Buck, *Greek Dialects* (1910).

5. Hesiod, fragment 8 (Markscheffel).

6. Hellanicus, fragment 10, in Müller, *FHG* i (Paris, 1885).

7. The word *xouthos* is used to describe an eagle's plumage, Bacchylides, v. 17; a bee, Sophocles, fr. 464; or its wings, Euripides, *Heracles*, 487; the throat of a nightingale, Æschylus, *Agamemnon*, 1142, Euripides, *Helena* 1111. Late writers use it also to describe the "shrill" sound of wind, Athenaeus, 608d, and of the cicada, *Anth. Pal.* ix. 373.

8. Herodotus, i. 57, says explicitly that the people of Attica "at the same time as they were transformed into Hellenes also learned anew the language."

9. Strabo, 333. For the history of the "Pelasgian theory" in Greece, Myres, *JHS*, xxvii. 170–225.

10. Most of these texts, discovered soon after 1900, are still unpublished: but their general character is indicated in Evans, *Scripta*, i and *Palace*, i, especially §§ 13, 29, 30.

11. This very important qualification of current estimates is due to Meillet, p. 40.

12. Examples are given by Meillet, and the whole subject has been examined by Kretchmer, *Einleitung in die Geschichte der griechischen Sprache* (Göttingen, 1896); A. Fick, *Die griechischen Ortsnamen* (Göttingen, 1905), influenced by literary and philological theories which are not generally accepted: W. Prellwitz, *Etymologisches Wörterbuch der gr. Sprache* (Göttingen, 1905): E. Boisacq, *Dictionnaire de la langue grecque* (Paris, 1916).

13. Herodotus, i. 57 (Pelasgians in Hellespont and Macedon); vi. 138 Lemnos and Attica; v. 26 (cf. Strabo 221: Lemnos and Imbros); ii. 51 (Samothrace); vii.

94 (Achaea); ii. 52 (Dodona); i. 146 (Arcadia, cf. Hellanicus in Stephanus s. v. *Arkás*. Hellanicus fr. 1 placed Pelasgians also in Thessaly, and regarded the Tyrrhenians of Italy as emigrants thence: cf. Ephorus, fr. 54, followed by Strabo, 337. Special language in Samothrace "now" (1st cent. B.C.), Diodorus, 4, 47, 3.

14. Herodotus, ii. 50–52, 56; viii. 44: Thucydides, i. 3.

15. Herodotus, i. 57; Thucydides, iv. 109 (Tyrrhenians in Macedon); Herodotus, i. 94 (in Lydia); Strabo, 221 (in Etruria); Æschylus, *Supplices*, 246–57 (on the Strymon); *Prometheus*, 860; Hecataeus, fr. 334.

16. Etruscan language: Pauli and others, *Corpus Inscriptionum Etruscarum* (Leipzig, 1913, in progress): R. S. Conway, *Etruscans* in *Encyl. Brit.* (1910), bibliography: *Cambridge Ancient History*, IV (1926), ch. xii: F. Skutsch, *Etruskische Sprache* in Pauly-Wissowa: G. Herbig, *Kleinasiatisch-etruskische Namenvergleichungen*, Sitzb. k. bayr. Akad., 1914, 34.

17. Lemnian inscription, Pauli, *Altitalische Studien*, ii (Leipzig, 1894).

18. Comparetti, *Museo Italiano*, ii. 673; Evans, *JHS*, xiv. 355; xvii. 375: Conway, *BSA*, viii. 125–56; x. 115, 247.

19. Herodotus, vii. 170–71.

20. R. Meister, *Sitzb. Preuss. Akad.* vii. 166–69: J. Vendryes, *Mém. Soc. Linguistique de Paris*, xviii. 271. Scylax 103 after noting the principal Greek and Phoenician cities of Cyprus, adds that "there are also other cities up-country, *barbarian*"—i.e., not Greek-speaking. Did the old language survive into classical times, like the Praesian language in Crete? He also says that the people of Amathus were "indigenous."

21. Myres, *Cesn. Hdbk.* Nos. 1863, 1864, 1865, 1867, 1872, 1875, and perhaps others also. For the "intermediary" script, *Handbook* No. 4311, *BM Exc. Cyprus*, (1900–27), figs. 58–60: Evans, *Scripta*, i. 70–75, figs. 37–38 and comparative table fig. 39.

22. For example, bracelets belonging to Eteandros, king of Paphos, are inscribed *e-te-va-to-ro: to: pa-po: pa-si-le-vo-se*, *Cesn. Hdbk.* Nos. 3552–53.

23. Herodotus, i. 173 speaks of *barbaroi* (people who did not speak Greek) in Crete in the days of Minos and Sarpedon, and of Sarpedon's colonization of Lycia with them. Diodorus, iv. 80, on the other hand, writes as if Greek had been introduced into Crete about 1330 (by immigrants from Thessaly under Tectamus grandson of Hellen), and speaks of a population of "mixed *barbaroi*" who in time became assimilated in language to their Greek neighbors. He is clearly commenting on the Homeric description of Crete (*Odyssey*, xix. 175–77) with five distinct peoples and a "confusion of tongues" among them. It has been frequently stated by commentators, presumably unacquainted with the early history of the island, that this passage is a late interpolation.

24. Athenaeus, vi. 271*b*, quoting a Carian writer, Philip of Syangela; cf. Strabo, 660–62 on the Carian language; 652 on Caunian:—Kretschmer, *Einleitung*, 376–84; J. Sundwall, *Klio*, xi. 464–80. Carian inscriptions (mostly names of mercenaries in the Egyptian service), A. H. Sayce, *Trans. Soc. Bibl. Arch.* (London, ix. 112–54; *Proc. BA* (1895), 35–43, 207. Leleges:—W. Aly, *Philologus*, lxviii. 428; W. R. Paton and J. L. Myres, *JHS* xvi. 267–69.

25. E. Littmann, *Lydian Inscriptions*, i. in the publications of the American Soc. for the Excavation of Sardis (Leyden, 1916): S. A. Cook, *JHS* xxxvii. 77–86: O. A. Davidson, *Skripten k. h. Vetenskaps-Samfundet Upsala* (1918): J. Fraser in *Anatolian Studies* (Manchester, 1923), 139–50.

26. Herodotus, i. 7: Radet, *La Lydie et ie monde grec* (Paris, 1893); especially p. 50 ff., 63 ff.

27. *Acts*, xiv. 11.

28. Lycian language:—Kretschmer, *Einleitung*, 371: Sundwall, *Klio* (1913), Beiheft ii.: Arkwright, *JHS* xxxviii. 45–73.

29. Phrygian and Thracian languages:—Kretschmer, *Einleitung*, chap. vii.: Giles, *CAH* II.i (bibliography 645–48), and Fraser, *Anat. Studies* (n. 25, above).

30. The Vannic kingdom:—Sayce, *CAH* III viii (bibliography); Herodotus, vii. 73, describes the Armenians as "colonists of the Phrygians."

31. In Homer, *Il.* ii. 848–50, Paeonians are bounded west by the Axius river; in Herodotus, v. 17, by the hill-country of Dysorus, west of the Strymon; after the Persian conquest, the Edoni, who were Thracians, occupied the Pangaean hills east of the Strymon, Herodotus, v. 124; and Thucydides, ii. 96, 98 describes many Paeonian tribes as vassals of Sitalces king of Thrace. For all this country see S. Casson, *Macedon, Thrace and Illyria* (Oxford, 1926); and for the early history and culture of Paeonia, G. H. Macurdy, *Troy and Paeonia* (New York, 1925).

32. The most recent summaries of Hittite discovery are by D. G. Hogarth, *CAH* II xi (1924), bibliography: A. E. Cowley, *The Hittites* (Schweich Lectures, London, 1918): F. Contenau, *Élements de Bibliographie Hittite* (Paris, 1922). For the language and documents:—F. Hrozny, *Boghazkeui Studien*, III i (1919–20): E. Forrer, "Die Inschriften und Sprachen des Hatti-Reiches," *ZDMG*, lxxvi. 174–269; *MDOG* lxi. (1921); *Die Boghaz-keui Texte in Umschrift* (Leipzig, 1923); Berlin Mus. *Keilinschrift-funde aus Boghaz-keui* (1916—in progress). Recent revisions of the whole question are by Hall in *Anat. Studies*, and Sayce in *Antiquity*, I (1927), 204 ff.: *Proc. Oxford Branch Class. Ass.* vi (1928) 1.

33. Herodotus, i. 96–99.

34. The Kassite dynasty:—R. Campbell Thompson, *CAH* I xv, II x, and appendices, pp. 696–701: its culture, A. T. Olmstead, *History of Assyria* (New York, 1923), 31 ff., 504. On the whole question, Meyer, *Sitz. Berlin* (1908), 14.

35. Hall, in *Anat. Studies*, 175; the Kassite sun god is Suryash, the wind god Buriash, the storm god Murattash; and "god" in general is *bogash*, recalling the Slavonic *bogu*, and our own "bogey."

36. H. Winckler, *MDOG* (1907), Nos. 35, 36: Jensen, *Sitz. Berlin* (1919), 367 ff.: Forrer, *ZDMG* (1922), 254: Giles, *CAH* II i. 13: Cook, II xiii (bibliography) *marianna:* Moret and Davy, *From Tribe to Empire* (London, 1925), 241: Luckenbill, *Am. J. Sem. Lang.* xxvi. 96 ff., xxvii. 270 n.

37. Biridasva:—Cook, *CAH* II xiii. 331: other instances in Hall, *PSBA* xxxi (1909), 234; *Anat. Studies*, 175.

38. A seal impression on a Cappadonian cuneiform document, about 2000 B.C., shows a two-wheeled car drawn by four animals, T. W. Pinches, *LAAA* I (1908) pl. XVII, 8–12. But their short manes and prominent ears suggest asses rather than horses.

39. Horse transported by sea: gem, Evans, *BSA*, xi. fig. 7: D. Fimmen, *Die kretisch-mykenischen Kultur*, fig. 103. Minoan chariots on gems, Bossert, 320 *c* (Vaphio); 325 *d* (Mycenae: shaft-grave IV); 234 (Mycenae: gravestone); 213 (Tiryns: fresco); 77 (Agia Triada sarcophagus): Evans, *JHS* xlv. 31–38, figs. 33–37 (chariot construction and inferences therefrom).

40. Homeric riding, *Odyssey*, v. 371; *Iliad*, xv. 679: in x. 503–14 the horses are driven. For Greek representations of dismounted warriors and their grooms, W. Reichel, *Ueber Homerischen Waffen* (Vienna, 1901), p. 41 n. On the François Vase, Troilus *rides* his horse to water, not to battle, when Achilles surprises him. Cf. Chapter VIII, p. 506–7 and notes 80–86.

41. Babylonian documents from Cappadocia: first recognized by Sayce, *PSBA* (1883): summary in S. Langdon, *CAH* I xii. 453–56; (bibliography, 648).

42. Early Hatti movements, summary in Hall, "The Hittites and Egypt," *Anat. Studies:* Campbell Thompson, *CAH* I xv. 561.

43. Breasted, *Am. J. Sem. Lang.* (1905), 153 ff.

44. Hogarth, *CAH* II xi. 259, doubts whether the Hatti dynasty can be traced back beyond 1580 B.C. and regards Subiluliuma as the founder of the eventual empire (261).

45. J. H. Breasted, *Ancient Records*, ii. 485, 525.

46. Sayce, *CAH* III viii. 172 (bibliography 717).

47. Egyptian relations with the Hatti kings, Breasted, *CAH* II iii–vii. The alliance-treaty of 1271, Langdon and Gardiner, *Jour. Eg. Arch.* vi. 179–205. The Hatti text, *MDOG* (Dec., 1907), 21; Egyptian text, Müller, *MDOG* vii. 5, pls. I–XVI, cf. Hall, *Anc. Hist.*, 364–67.

48. The "meadow Asia," Homer, *Iliad*, ii. 461. Asios as a proper name (1) *Iliad*, ii. 537–38 from Arisbe in N. Troad; his son Phaenops lived at Abydos, xvii. 583; (2) *Iliad*, xvi. 717–18, xii. 95, xiii. 384–771, Hecuba's brother, from the Sangarius valley in Phrygia: he had a son Adamas, xii. 140, xiii. 561.

49. W. Dörpfeld and others, *Troja-Ilion* (Athens, 1902), I, 101–82. W. Leaf, *Troy* (London, 1912), ch. iii.

50. Lesbos in Homer, *Iliad*, xxiv. 544, is on the margin of Priam's régime toward the Ægean, as Phrygia is landward, and "Hellespont" on the north. It was raided by Agamemnon's force during the Trojan War (*Iliad*, ix. 129–30, 271, 664, cf. *Odyssey*, iv. 342, xvii. 133) and was a port of call on the homeward journey (*Odyssey*, iii. 169). The Homeric allusion to Lesbos as the "settlement of Macar" vouches for the early date of a cycle of traditions to which reference must be made pp. 140, 351: for Macar (also called Macareus) had occupied Lesbos and other coast islands, in the generation of 1300, Diodorus, v. 81. See note 53.

51. Forrer, *MDOG* No. 63. 9.

52. Alašya:—W. Max Müller, *Asien und Europa* (Leipzig, 1893), 261, 292, 394; Hall, *Anc. Hist.*, p. 243 n. (references, 269). Apollo Alasiotes: in a dedication at Tamassos, Deecke, *Sitz. Berlin* (1887), 122; Hall, *CAH* II, 280–81; G. Husing, *Memnon* III (1909), 90.

53. Diodorus, v. 81. 6, dates this Æolid settlement in Lesbos by a genealogy which assigns the founder to the generation of 1200; but he has combined his materials wrongly as v. 67 shows. As Macareus brought Ionians from Peloponnese, he clearly belongs to the generation of Ion (1330).

54. There was an Alakšandu also in Arzawa (S E Asia Minor) a contemporary of Rameses II, *MDOG* (Dec. 1907).

55. Müller, *AuE*, 354 ff., 369 ff. Breasted *CAH* II 141, Hall II 281, Bury II 487–88.

56. The alternative identification of Attarissyas with the Greek hero Perseus (Sayce, *JHS* xlv. 161–63) has the disadvantage that Perseus belonged to the generation of 1300. The chronological coherence of Greek folk-memory for events and persons in this century is too close for an anachronism of this kind to be admitted; see Chapter VI and especially pp. 312–3. The Asiatic adventure of Perseus, recorded by Eusebius, *Chronicon*, i. 62 is probable enough, in the days of Eteocles son of Andreus (p. 116 above), but no allusion to it has yet been recognized in Hatti documents of that generation.

57. The Keftiu tribute is illustrated in Bossert, Nos. 333–42. The various styles are carefully distinguished, and referred to different peoples and districts by Wainwright, *Liverpool Annals*, vi (1913), 24. Among these are "princes of the islands in the midst of the sea." Hall, and in essentials Evans, attribute not only many of the objects but most of the tributaries to Crete. But a substantial residue remains non-Minoan. For a Keftiu city in North Syria, *Ill. Lond. News*, 2, 11, 29.

58. J. H. Breasted, *Ancient Times* (Boston, 1916), 236, fig. 143.

59. Sayce, *JHS* xlv. 162.

60. First identified by de Rougé, *Rév. Archéologique* (1867), 35, supplemented by Max Müller, *Asien und Europa nach alt-ägyptischen Denkmaler* (Leipzig, 1893). Later discoveries are summarized and discussed by H. R. Hall, *CAH* II xii.

61. In view of the reference in a Hatti document (p. 115 above) to a hostile city Taroisa, somewhere to the northwestward, it is possible that these are Trojans, like the Iliuna who served in the Hatti force at Kadesh in 1278. It was in the generation 1260–1230 that Laomedon, king of Troy, ruled over "far islands" and interned in them persons whom he disliked. He had therefore some kind of sea-power, Homer, *Iliad*, xxi. 454.

62. Manetho, quoted by Josephus, *c. Apion.* i. 15–16; Hall, *Anc. Hist.*, 308; Breasted, *CAH* II 130–35. For Greek tradition, Myres and Frost, *Klio*, xiv. 412.

63. Argonauts in Libya, Apollonius Rhodius, iv. 1541–53; Herodotus, iv. 179.

64. Bellerophon, *Iliad*, vi. 162–211; L. Malten, *Jahrb. d. Inst.*, 1925, 121.

65. Taphian traders and pirates, *Odyssey*, i. 105, 181, 419; xiv. 452; xv. 427; xvi. 426.

66. Inscribed sword from Egypt, Borchardt, *Pr. Z.*, iv. 233: see Chapter VII, note 109.

67. *Odyssey*, xiv. 246–97 (Egypt and Libya); xvii. 425–44 (Cyprus).

68. Victory-records of Rameses III: Breasted, *Ancient Records*, iv. §§21–58, First Libyan War; 59–82, combined Land- and Sea-raid (esp. 64); §§ 84–91, Second Libyan War: 403, settlement of the surviving raiders in Egyptian protectorate.

69. Genealogy of kings of Salamis:—Isocrates, *Evagoras*, xii. 18; Pausanias i. 3, 2. The name Evagoras goes back to a son of Neleus, and a son of Priam. Apollodorus, I 93; iii. 152. For later Zakkaru, see note 81.

70. E. Oberhummer, *Die Insel Cypern* (Munich, 1903), i. 6–15.

71. Myres and Frost, "The Historical Background of the Trojan War," *Klio* (1915), 393–413: Thrasyllus, fr. 3 (Müller) puts the Rape of Helen ten years before the outbreak of the War.

72. Journey of Menelaus, *Odyssey*, iv. 83–85.

73. In *Acts*, xxvii. 27, the ship drifts fourteen days from Crete to Malta; *Odyssey*, xiv. 300–15, nine days from Crete to the west coast of Greece. See n. 67.

74. Trojan "dispersal," Casson, *CR* xxvii. 153.

75. Intercourse with Sicily, *Odyssey*, xx. 383; xxiv. 211, 307, 366, 389; with South Italy, i. 184; Trojan settlements also in Sicily, Thucydides, vi. 2; Diodorus iv. 83; Virgil, *Æneid*, iii. 294 ff. (Helenus in Epirus); i. 242 (Antenor in Po valley); v. 30 (Acestes in Sicily).

76. Minoan intercourse with the West:—T. E. Peet, *The Stone and Bronze Ages in Italy* (Oxford, 1909), chs. xvi, xvii: Evans, *BSA*, viii. 122–24; *Palace*, i. 87 (liparite); bone plaques from Sicily and Hissarlik, also Malta—Peet, 204, fig. 75: H. Schmidt, *Schliemann-Sammlung*, No. 7953; from Malta, Zammit *Archaeologia* lxx (1920), 195, fig. 19. Cf. Chapter V, n. 48 below.

77. de Rougé, *R. A.* 1867; Chabas, *Etudes sur l'antiquite historique* 1873 (Italy). Sir W. M. F. Petrie, *History of Egypt* (London, 1905), iii. 148 (Libya).

78. Etruscan origins reviewed—Conway, *CAH* IV, ch. xii. especially 410; Randall-MacIver, *The Etruscans* (Oxford, 1927), Chapter I.

79. The Thespiadae in Sardinia, Diodorus, v. 15. The Argo in the Adriatic, Apollonius Rhodius, iv. 307–8. See Chapter IV n. 33.

80. Philistines, Hall, *CAH* II xii.

81. W. Max Müller, "Die Golenischeff Papyrus," *MVAG.* v. (1900).

82. Minoan sites in Cyprus, *BM. Exc. Cyprus* (but the dates there proposed are superseded by those of Evans, *JRAI* xxx [1900], 199–220); Poulsen, *JRAI* (1911), 215–48 and Myres, *Cesn. Hdbk.*, xxx. 45–46, 50: Phythian-Adams, *Bull. BSA Jerusalem*, i–iii, and C. L. Woolley, *Syria*, II (1921), 177–94. *LAAA* ix (1922), 41. Sir Arthur Evans puts this intercourse with Cyprus as early as 1500.

83. J. L. Myres and M. Ohnefalsch-Richter, *Catalogue of the Cyprus Museum* (Oxford, 1899), list of sites.

84. Safety pins and iron weapons are found also in a few of the latest tombs at Enkomi, described in *BM Exc. Cyprus*, and discussed p. 413.

85. Myres, *Cesn. Hdbk.*, Nos. 394–99, 466–70.

86. *Iliad*, xi. 20–21.

87. *Odyssey*, xvii. 442–43.

88. The only inscriptions, other than Cypriote, earlier than the spread of the classical *koiné* in the fourth century, are the tombstones of a Naxian, and a professional soldier from Halicarnassus, in Ionic dialect and lettering. They were found at Amathus, close to the sea, and are of the beginning of the fifth century, when a large force of Ionians was in Cyprus assisting Greek cities there in revolt against Persia: Herodotus, v. 103–4, 110–15: *BM Exc. Cyprus*, 95.

89. The best series is from Ascalon:—Phythian-Adams, *Bull. BSA Jerusalem*, i–iii; *PEFQS* (1921), 161, 170; (1922), 122 (J. Garstang); (1923), 60: also from Gaza (1923), 11, 18.

90. "Philistine" pottery—Macalister, *Gezer*, III, pls. clix.–clxviii.; Phythian-Adams, *PEFQS* (1923), 78; Petrie, *Gérar*, London 1928. Pl. lxiii–iv.

91. For example, Agapenor of Arcadia went astray on his voyage homeward from Troy, and founded Paphos, Pausanias, viii. 5. 2; his landing-place was known as the "beach of the Achaeans," Strabo, 682. The Parian Marble 47 gives the date 1176.

92. Meshech and Tubal: *Genesis*, x. 2; I *Chronicles*, i. 5; *Ezekiel*, xxvii, 13; xxxii. 26; xxxviii. 2 (as a general phrase for the peoples of Asia Minor under "Gog," the Lydian king Gyges): Strabo, 497–99 (Moschi); 527–34, 548 (Tibareni); 544–50 (Chalybes): Hall, *Anc. Hist.* 327, 386–88 (Tiglath Pileser I describes the invasion as fifty years before his time, 1107). For the special significance of the Chalybes see p. 437; D. G. Hogarth, *CAH* II 247 ff., 274, III 54 ff., 137 ff., 167; *Kings of the Hittites* (London, 1926), 56–63.

93. Cook, *CAH* I 157, II 379: Josephus, *Ant.*, viii. 3, Tyre founded 240 years before Solomon's Temple: one year before the fall of Troy (i.e., 1183), Justin, xviii. 3. In Menander, frs. 1 and 3 (*FHG* iv. 446: Josephus *c. Apion.* i. 18, there is confusion between two Hirams, one contemporary with Solomon (ca. 960), the other with Menelaus (ca. 1200).

94. Cook, *CAH* II 303 ff., 319; contemporary documents in xv–xiv centuries; J. A. Knudtzon, *Die El-Amarna Tafeln* (Leipzig, 1915), Nos. 146–55.

95. Justin, xviii. 3: Tyre was founded by the "men of Ascalon."

96. Odysseus' "yarn," *Odyssey*, xiv. 287–304.

97. Sidon in Homer, *Iliad*, vi. 290–91; xxiii. 743; *Odyssey*, iv. 84, 618; xiii. 285; xv. 118, 425. Thebes, *Iliad*, ix. 381: *Odyssey*, iv. 126; xv. 247.

98. I *Kings*, v. 1–6.

99. Solinus, 51: The Cilician empire "reached Pelusium in Egypt, and included Lydia, Media, Armenia, Pamphylia and Cappadocia." Do the "Medes" here stand for Mitanni (Matiene)?

100. Mallus (Mannus), Müller, *AuE*, 340, 344; Myres, *CAH* III, 646–47.

101. R. Weill, *Syria* ii (1921), 144.

102. *Iliad*, v. 473–74.

103. Mopsus in Lycia:—Athenaeus, vii. 297 f. founded Mallus, see note 100 above, Strabo, 675, and had a shrine there, Plutarch, *de def. or.* 45. Conon, *Narr.* 6. This Mopsus was grandson of Tiresias the great Theban seer (Pausanias, vii. 3.2). Another Mopsus, from Œchalia in Thessaly, sailed in the Argo and died on its voyage to Libya, Apollonius Rh. i. 65, 80; iv. 1518; Pausanias, v. 17. 4; Strabo, 443. There was a town Mopsus between Tempe and Larissa.

104. It is tempting to connect Mopsus with the name of the Moschi (Muski).

105. Bellerophon:—*Iliad*, vi. 152–211. There were later legends of his doings in Lycia and at Tarsus, Pauly Wissowa, *Real-Encyclopaedia*, s. v. The historical significance of these eastern wanderings is enhanced by the discovery of an "ancient port and Cypro-Cretan colony, of the fourteenth-thirteenth centuries, with rich chamber-tombs like those of Minoan Cyprus, at Minet-el-Beida near Latakia in North Syria: Schaeffer, *Illustrated London News*, 2 Nov. 1929.

106. Javan:—*Genesis*, x, 4–5; I *Chron.* i. 7. For *Rodanim* the Authorized Version has *Dodanim*, following an alternative Hebrew text which appears to

result from misreading an unfamiliar word. The same suggestion was made recently in an Oxford lecture by the late Dr. Hogarth, but I cannot find any allusion to it in his published works.

107. "Ionian and Carian" adventures in the Delta about 664, Herodotus, ii. 152.

108. Lycians, Herodotus, i. 173. That Herodotus attributed this incident to the "later Minos" (p. 321) is clear from his story of the contemporary arrival of Lycus the son of Pandion of Athens, consequently an uncle of Theseus, and belonging to the generation of 1260, to which the "later Minos" belongs. But here there is clearly a popular etymology, for the Lykki of Egyptian documents are of considerably earlier date than 1260. For Bellerophon, *Iliad* vi. 155–204.

109. Carian armor, Herodotus, i. 171; Lycian feather headdress, vii. 92.

110. Diodorus, v. 59. 1 (Althaemenes); v. 54. 4 (Carpathus); v. 84. 3 (Rhadamanthys); v. 79. 3 (Sarpedon, cf. Herodotus, i. 173).

111. The Rhodian "Children of the Sun," Diodorus, v. 56–57.

112. Macareus in Lesbos, Diodorus, v. 81. He had posts also as far south as Cos and Rhodes but there may have been confusion in antiquity between these and the much earlier settlements of Macar the "Sun man."

113. Whether the names Attarissyas and Atreus are identifiable philologically is of minor importance, in view of the cumulative evidence for the activities of the contemporaries of both; compare what is said on the whole question in Chapter VI.

114. Though the folk-memory of Lesbos did not recall the doings of Eteocles it went back further, to an Argive settlement seven generations "before Deucalion's flood": that is, about 1630, Diodorus, v. 81.

115. Arcadian and Cypriote words in Homer:—T. W. Allen, *Homer: The Origins* (Oxford), 1924, 100; C. M. Bowra, *CQ*, xx. 168–76: another paper in press.

116. Herodotus, i. 173; Diodorus, v. 80. 2.

117. The "List of Sea-powers":—Myres, *JHS* xxvi. 84 ff., gives reasons for bringing down the dates of the earlier sea-powers in this list about a hundred years below Eusebius' dates; but see criticisms of Fotheringham, *JHS* (1907), 75 ff.; Ure, *The Origin of Tyranny* (Cambridge, 1912), 95–99: Burn, *JHS* xlvii. 165 ff. For Lydians, Thracians, and Phrygians in this connection, Herodotus i. 7.94, vii. 73–76.

118. R. Meister, *Abh. k. sächs. Ges. Wien.* (*ph.-hist. kl.*), xxiv. 3 (Leipzig, 1904), 15. Hawes, *BSA* vi. 258–60.

119. Strabo, 333.

120. Thucydides, i. 12.

121. Herodotus, v. 22.

122. The Macedonian language:—Kretschmer, *Einleitung*, Chapter IX.; Meillet *Aperçu*, 36; Giles, *CAH* II 31.

122a. In *Iliad*, ii. 612–13, Agamemnon is said to have supplied his Arcadian contingent with ships "because they took no heed to seafaring." From this and from the named Arcadian towns it has been inferred that Arcadians were already cut off from the sea. But the Arcadian country remains without seacoast, whatever language is spoken there. What is in question is the pre-Dorian distribution

of a kind of Greek which could only be described as Arcadian at all after it had ceased to be current in other parts of Peloponnese. It is not therefore necessary either to regard the *Catalogue* as post-Dorian, or to accuse the poet of geographical or political inaccuracy.

123. *Odyssey*, xix. 175.

124. Herodotus, viii. 73. The people of Argos spoke the same dialect as the Athenians in early times, Pausanias, ii. 37. 3.

125. Herodotus, viii. 44; v. 66. 69. Ionic tribes as result of a "synoecism" of Ionian and Attic elements before Theseus, Aristotle, *Ath. Pol.*, xli. 2 and fr. 1.

126. Yevanna among Hatti allies, Müller, *AuE*, 355, 369.

127. Müller, *AuE* (Leipzig, 1893), 355 ff., 369 ff.

128. See note 112 above.

129. Carians and Lycians in Ionian cities, Herodotus, i. 146–47.

130. Herodotus, i. 142.

131. The traditional date for Ion is after Erechtheus (Herodotus, viii. 44) and before Theseus (Aristotle, *Ath. Pol.*, 41. 2 and fr. 1): the story followed by Euripides, *Ion*, places him in the generation of 1300 B.C. Herodotus i. 145 says that the reason why the Ionians lost their former abodes in North Peloponnese was that they were "defeated by Achaeans" and expelled. As he also says (viii. 73) that the Peloponnesian Achaeans had "left their own land and inhabit that of others," he may have regarded this movement as an incident of the "coming of the Dorians"; but there had been an Achaean conquest of the north coast of Peloponnese much earlier, for in the Homeric *Catalogue* (*Iliad*, ii. 574–75), Helice, Ægium, and Pellene, which are in Herodotus' list of Ionian townships, are under the rule of Agamemnon son of Atreus; and his description of the non-Dorian population of Sicyon as "beach folk" Aigialeis (v. 68) accords with the *Catalogue's* description of this region as "along all the beach" *aigialon*. Compare the movements of Macareus, Diodorus, v. 81 and notes 53, 112 above.

132. Theseus' mother Æthra, for instance, was a Pelopid princess from Sicyon just south of the Isthmus; and one of Theseus' own political achievements was the establishment of the Isthmus as the boundary between "Ionian" country and "Pelops' island." One of the boundary stones was still shown in classical times. Plutarch *Theseus*, 25. For the "Ionian" Sea west of Greece, Herodotus, vi. 127, vii. 20, ix. 92.

133. Herodotus, v. 58, says expressly that the Greek-speaking neighbors who learned the art of writing from the Cadmeian immigrants were Ionians.

134. Homer, *Iliad*, ii. 536–45; Herodotus, i. 146. Later writers associate the name Abantes with Thrace, Argos, and other districts and peoples.

135. Homer, *Iliad*, xiii. 685. In the detailed account of the leaders of these contingents the Athenians seem to take the place of these Ionians, who are not mentioned again, and as they have no place in the Homeric *Catalogue* it appears that the Athenians themselves are meant. The Epeians in the same list are an Ætolian people, who had also a footing in Elis where they had a war with the Pylians in Nestor's younger days. This mention of them rather suggests that other Epeians had moved from northwest Greece into the neighborhood of the peoples brigaded with them here.

136. In the *Catalogue* the leaders of contingents from Orchomenus (*Il.* ii. 512–15), the Abantes (1. 540–1), Salamis (1. 557) are "divine born," as are Achilles (1. 685), Protesilaus (1. 698), Podarces (1. 704), the Asclepiads (1. 731), Polypoites (1. 740) among the chiefs from Thessaly. For the significance of these "divine-born" families see pp. 299, 308.

137. Herodotus, viii. 44.

138. Herodotus, i. 57; vi. 137.

139. See note 50 above. Other instances are Achilles' raid on Lyrnessus and Thebes (*Iliad*, ii. 689–93); his great cattle raid on Mount Ida (*Iliad*, xx. 90–91); and the joint foundation of Achilleum by all the allies of Menelaus (Herodotus, v. 94).

140. Ionian and Æolic Smyrna, Herodotus, i. 14–16, 149–50.

141. An ingenious claim that the first Greek spoken in Peloponnese was Arcadian has been stated by J. P. Harland, *Harvard Studies in Classical Philology*, xxxiv (1923), 18 (cf. Giles, *CAH* II 29); but he assumes (1) that the Minoan colonists in Cyprus spoke Greek; (2) that the dialect which was spoken by colonists in Cyprus must have been long established in their mother-country, an argument which he would hardly accept in respect to Doric-speaking colonies. For Dr. Harland's belief that Greek of some kind was the language of the "gray-ware" (="Minyan") culture of Orchomenus there is probably good reason (as will be seen later, p. 287); but the arguments of P. Kretschmer, *Glotta*, i. 9, M. P. Nilsson, *Gött. Gel. Anz.* (1914), 534, and C. D. Buck, *Classical Philology*, xxi (1926), 1–26, and especially Buck's criticism of Harland (p. 23), make it probable that this first southern dialect was Ionic, and that (as the closer resemblances between Arcadian and Æolic indicate) Arcadian speech was differentiated farther north, and spread southward already well characterized.

142. Herodotus, i. 56 gives at the same time the earliest and the most circumstantial account of the origin of the "children of Hellen." In the fourth century there were other theories about the Dorians, the political tendencies of which are obvious. The failure of Greek ethnologists to distinguish either Arcadian or West Greek from Æolic resulted mainly from their prepossession by a "Pelasgian theory" of the early inhabitants of Arcadia and of Dodona, the chief source of folk-memory in the northwest; and the circumstance that the Homeric poems were in an idiom mainly Ionic misled them as to the relations between the Homeric "Achaeans" and the Ionians of classical times. Compare p. 131 above.

Notes to Chapter IV

1. I have dealt with this topic at greater length in a paper on "The Background of Greek Science" (*University of California Chronicle*, xvi. 4, 1914). For Moira see F. M. Cornford, *From Religion to Philosophy* (London, 1912).

2. In Lithuanian *deivē* still meant "ghost," but *dēvas* (like Greek *theos*, Latin *deus*, and other cognates) was used for "god" in general: the Sanskrit *dēvás* came to denote the beneficent spirits in nature at large; but Iranian *daēvō* the malevolent "demons."

3. For the names of Greek gods, E. Kalinka, *Neue Jahrbücher*, xlv (1920), 401 ff.; C. D. Buck, *Classical Philology*, xxi (1926), 10.

4. Apollo:—Kretschmer, *Glotte*, xiii. 242; M. P. Nilsson, *Griechische Feste* (Leipzig, 1906), 388; Boisacq, *s. v.* The likeness of his name to *apella*, the Spartan public assembly, is tempting; but was Apollo anywhere "Lord of Hosts"? And what did *apella* mean? If it is synonymous with the more usual *agora*, Apollo may be the "initiator" or "convoker" of assemblies. Or did *apella* mean a "fence," as Hesychius says? An obscure word *apelos* for a bruise or sore (cf. *erysipelas* "red sore") may reveal him as sender (and averter) of such injuries. If he had been a fertility-god, the derivation Apollo-*apple* (Rendel-Harris, *JHS* xlv. 229) might "bring him from the north." But are these more than popular etymologies for an unfamiliar name?

5. For theories about the "Hyperborean" ritual at Delos, L. R. Farnell, *The Cults of the Greek States* (Oxford, 1907), iv. 356. The Cretan month named *Hyperberetos* may well be simply Apollo's month; and Herodotus' circumstantial account of the "Hyperborean Road" from the head of the Adriatic shows at all events what people believed in his day, however ignorantly. For the Delian tombs see n. 39 below.

6. The current notion that Apollo "came from Asia Minor," popularized by U. Wilamowitz, *Greek History Writing and Apollo* (Oxford, 1912); *Hermes*, xxxviii. 375, and accepted even by so cautious a critic as M. Nilsson, *Griechische Feste* (Leipzig, 1906), 102, with the additional argument for Oriental origin that Apollo's festivals are on the seventh of the month (*Primitive Time-reckoning*, Lund, 1920, p. 368), accounts for the geographical distribution of many sanctuaries in Hellenic times, and for some of Apollo's functions, but not for all. Nilsson himself looks to him for the Hellenic counterpart of the Minoan "Master of Animals"; his bow classes him with the other hunting gods, and his temple at Delphi replaced a Mycenaean sanctuary. The alternative is expounded by Farnell, chs. iv–vii.

7. Poseidon (Poteidāfon: cf. the place name Poteidaia), Farnell, iv. chs. i–iii.; Kretschmer, *Glotta*, i. 27 ff.

8. Aphrodite:—Kretschmer, *Kuhn's Zeitschrift*, xxxiii. 267; *Glotta*, v. 306.

9. Dionysus, Kretschmer, *Einleitung*, 314; *Aus der Anomia*, 27.

10. Hephaestus may be from Asia Minor: M. Pohlenz, *Neue Jahrbücher*, xxxvii. 549 ff.

11. Hermes, Nilsson, *Griechische Feste*, 388 ff.

12. The notion that Hera must be "Asiatic," because the Heraeum at Samos is at some distance from the Ionian city, may be safely abandoned, now that the temple site is found to be at the Late Minoan settlement: for this was certainly not "Asiatic," and Diodorus, v. 81. 7, reckoned it as one of the foundations of Macareus, who came from North Peloponnese about 1260 when that district was still "Ionian" (p. 556, n. 53).

13. The name *Hera* seems to be a cognate of *heros*, not in the "chthonic" sense (supposed by Wide, *Archiv f. Relig. Wiss.*, x. 262) but in the original meaning of "strong to save," Boisacq, 329: it is probably related to the verb *servo* in Latin and may be the Greek translation of some earlier title; elsewhere there are deities simply called *Anassa* "queen," and Aphrodite at Paphos was addressed as "the Paphian goddess." C. Blinkenberg, "Le Temple de Paphos," *K. Danske. Vid. Selsk. Histfil.*, ix. 2 (1924), 29.

14. Athena pre-Hellenic:—Wilde, *Ath. Mitth.*, xxvi. 251: Kretschmer, *Glotta*, xi. 282: Wilamowitz, *Sitz. Berlin* (1921), 950 ff.

15. Owls representing Athena:—Douglas, *JHS* xxxii. 174 fig. 1: Pottier, *BCH* xxxii. 541 pl. VII 3: D. de Lasseur, *Les Déesses armées dans l'art classique* (Paris, 1919), 354, fig. 131. Snakes:—Herodotus, viii. 41: J. E. Harrison, *Prolegomena to Greek Religion*[2] (Cambridge, 1907), 306, fig. 84; *Themis* (Cambridge, 1912), 265, fig. 65.

16. Gods' names as town names: Kretschmer, *Einleitung*, 418–20.

17. Athena is "Alalcomeneïs" in Homer, *Iliad*, iv. 8; v. 908, associated closely in both passages with "Argive" Hera. Mykene "fair-crowned," *Odyssey*, ii. 120, with Alcmene and Tyro, tragic figures of olden days.

18. This Egyptian spear-and-shield goddess has been traced back to predynastic times, P. E. Newberry, *Liverpool Annals*, i (1908), 18; *Proc. BA* (Liverpool, 1923), 184.

19. Worship of monsters and bogeys, J. E. Harrison, *Prolegomena*,[2] 176–207.

20. The "Averter of Flies" at Olympia, Pausanias, v. 14. 1; compare x. 12. 5, and Sir J. G. Frazer's note of other instances.

21. The Greek cult of heroes, L. R. Farnell, *Greek Hero Cults and Ideas of Immortality* (Oxford, 1921), especially ch. xi, *Cults of Epic Heroes* and ch. xii, *Cults of Real Persons*. On hero-worship generally, see note 39 below.

22. H. J. Rose, *Primitive Culture in Greece* (London, 1925), 30; for the classical hero cults see pp. 31–33. Achilles and Sarpedon lament their exit from this life, not what they are to enter into.

23. When the wraith (*psyché*) of Patroclus appears to Achilles (*Il.* xxiii. 65 ff.) it has his natural voice and his clothes, and is just like him; but this was in Achilles' dream. When he awoke, the phantom sank "underground, like smoke, gibbering"; and Achilles' words (xxiii. 103–7) imply that he had not expected even so much as this to survive his friend's death: "it was awfully like him!"

24. Compare the qualification for sainthood in the Roman Church; Benedict XIV *Opera* (1839) *de Servorum Dei Beatificatione*, i. 14; iii. 21: "For the canonisation of a servant of God, it suffices that it be proven that the person has practised in a pre-eminent and heroic degree the virtues which occasion offered him according

to his condition, his rank, and his personal estate" . . . . [special terms for martyrs follow, and then] . . . . "as many as after the laudable exercise of heroic virtues died a death which was precious in the sight of God, and after their death were resplendent with the glory of miracles—these are the objects of canonisation." But there is no evidence that Greek opinion insisted on the "glory of miracles," though some heroes attained to this. On the Greek notion of "influence" or initiative in man and in nature, see Myres, *The Political Ideas of the Greeks* New York–London, 1927), Chapter III.

25. The "sons of Æacus" were sent by Ægina to Thebes instead of troops (Herodotus, v. 80–81): as they were no use, "the Thebans returned the Æacidae and asked for the men." At the battle of Salamis they arrived in the nick of time, and did better (viii. 64, 83–84).

26. Melanippus was brought from Thebes to Sicyon to keep out the Argive hero Adrastus, Herodotus, v. 67.

27. Pelops' shoulder was sent to the Trojan War, lost at sea, and recovered later, Pausanias, v. 13. 4–6.

28. And sometimes antiquity had mistaken the place; the "*Tumulus of Pelops*" at Olympia has been excavated, and "contained no bones but those of a neolithic baby." Dörpfeld, *AM* xxxiii. 185 ff.; Rose, *Prim. Cult.*, 33.

29. G. Œconomus, *De profusionum receptaculis sepulcralibus* (Athens, 1921).

30. P. Walters, *Jahrb. d. Inst.*, xiv. 103.

31. Astronomical date for Hesiod: *Works and Days*, 564–67; T. W. Allen, *Homer* (Oxford, 1924), 86 ff.

32. An archaeological equivalent of these "Silver-Age" burials is suggested on p. 267 Vlachs: A. J. B. Wace and M. S. Thompson, *The Nomads of the Balkans* (London, 1914), 51—"In contrast with the Greeks who as a race live principally on bread, olives, cheese, and garlic, ... the Vlachs think plain roast meat, hot or cold, in large quantities essential to any meal worthy the name."

33. Hesiod, *Works and Days*, 167–73. The words "far from the deathless gods; among them Kronos is King" are not found in most manuscripts and may be a late addition. If original, they seem to mean that the heroes were men, and are now no more, as Kronos was a god, and is no more. Yet Kronos was not dead; nor have the heroes died the death of ordinary men. Like Kronos, they have "changed their world." It has not been generally observed that the heroes who thus "went west" were not those who "fell in the war" but the survivors. Of the fate of a few of these, folk-memory preserved something. Odysseus might have stayed with Calypso if he had not preferred Ithaca and Penelope; Diomedes went to South Italy; Helenus son of Priam settled in Epirus, *Æneid*, iii. 295 ff.; Antenor sailed up the Po and founded Padua, *Æneid*, i. 242 ff.; and there were "Trojans and Phocians" in the west of Sicily, Thucydides, vi. 2, and Thespiadae in Sardinia, Diodorus, v. 15.

Calchas, Mopsus, and Teucer, on the other hand, "went east," to Cilicia and Cyprus (p. 135). Diodorus v. 82. 1 quotes a theory that the *Makarôn-nesoi* were the "islands of Macar or Macareus," namely the thirteenth-century settlements along the seaboard of Asia Minor. As some of these same islands were believed to have been colonized by Rhadamanthys, this piece of folklore or folk-memory

may go back to the Homeric Age. And it may be that the basis of Hesiod's statement is folk-memory of a widespread evacuation of "Achaean" Greece by unheroic "heroes" who still had command of the sea ways. But, as the philosopher said, "Where are the thank-offerings of those who were drowned?"

34. *Odyssey*, iv. 561–69. The same privilege befell Tithonus, and was narrowly avoided by Odysseus.

35. Herodotus, vi. 61.

36. Pausanias, iii. 19. 9. But except Helen and Menelaus, did any "hero" in the Homeric sense, of whom it was known that he was one of the survivors who had passed over to the Isles of the Blessed, ever become the object of a "hero cult" in the Greek sense?

37. The Pelopeum at Olympia, Pausanias, v. 13. 1, with Frazer's note, and E. Curtius and E. Adler, *Olympia, Ergebnisse* (Berlin, 1890–97), Textband iv. 3.

38. Funeral games in Thrace, Herodotus, v. 8.

39. Hero-worship in general (and for most of the instances and phrases quoted in the text): J. Hastings, *Encycl. of Religion and Ethics:* art. "Heroes," especially the sections by A. C. Haddon, A. L. Kroeber, A. C. Pearson. For Greek: L. R. Farnell, *Greek Heroes and Hero-worship* (Oxford, 1921): P. Foucart, "Le Culte des Héros chez les Grecs," *Mém. Acad. Inscr.* xlii (1918), 40. That some "faded" gods were worshiped with rites like those appropriate to heroes is not unlikely; but if they were, that is strong evidence that there were cults of real "heroes" at their reputed tombs: otherwise such assimilation could not have happened. Usener, *Archiv f. Relig. Wiss.* (1904), 313–39, and Miss Harrison (*Prolegomena*, 1903) wrote before the discovery of the venerated tombs in Delos, Herodotus, iv. 34–35: Picard and Replat, "Herodote, l'Artemision Délien, et les deux tombeaux des Vierges hyperboriénnes," *BCH* xlviii. 247. But the continuous cult at the "beehive" tomb at Menidi should have warned them.

40. Rembertus, *Vita S. Anscharii*, 23: "practically contemporary" according to H. M. Chadwick, *The Heroic Age* (Cambridge, 1912), 255–56. The following instances are among those collected by Seaton in Hastings *Enc. Rel. Eth.*, s. v. *Heroes: Teutonic.* T. W. Allen, *JHS* xxxv. 89 connects Greek hero-worship similarly with a public catastrophe.

41. Xenophon, *Cyropaedia*, ii. 1. 1. In some parts of India and elsewhere in the Near East, worshipful mounds are still ascribed to Alexander or his men.

42. The phrases quoted, from *Ecclesiasticus*, xliv. 14, show the great men of Israel commemorated, but not worshiped; nor were they conceived as persisting, or helping the men of today; so deeply was Hebrew thought permeated by the Babylonian notion that from the moment of death all was over.

43. Herodotus, vi. 108.

44. It is encouraging to find that in general the views expressed in this section are in accord with those of M. P. Nilsson, *The Minoan-Mycenaean Religion* (Lund, 1927), which was not published till these lectures were nearly ready for the press.

45. Minoan hilltop sanctuary at Petsofà in Crete, Myres, *BSA* ix. 356 ff.

46. It is now becoming possible to distinguish between monuments of the empire which culminated about 1300 B.C. and collapsed about 1200 B.C., and those of the subsequent centuries from 1200 to the Assyrian conquests after 750

B.C., thanks chiefly to the stratified deposits at Carchemish. For the later styles the best collection of illustrations is in D. G. Hogarth, *Kings of the Hittites* (London, 1926). For the earlier, P. Westhein, *Hethitische Kunst* (Berlin, 1921). Though there may have been a large measure of continuity in religious observance throughout, the replacement of the Hatti power by that of the "Muski" peoples (newly arrived from Europe, as they appear to have been), makes it unsafe to draw conclusions from any monument of which the attribution is not certain, one way or another.

47. *Cambridge Ancient History*, pls. I 238 (*a*), compare (*b*) for the male dress and prominent breasts. Other examples: D. le Lasseur, *Les déesses armées* (Paris, 1919), 341–47.

48. Animals and monsters, Nilsson, *Minoan-Mycenaean Religion*, 307–28.

49. Statues of gold and ivory: Pausanias, v. 11. 1 (Zeus); i. 24. 5 (Athena); ii. 17. 4 (Hera); ii. 27. 1 (Asclepius); occasionally also for mortals, v. 17. 4; v. 20. 10 (Olympias and Eurydice of Macedon).

50. The "blue-black" hair of Poseidon, *Iliad*, xiii. 563; xiv. 390: *Odyssey*, ix. 528 etc.: of a horse, *Iliad*, xx. 224.

51. The "blue-black" eyebrows of Zeus, *Iliad*, xvii. 209.

52. Hera, blond, on a "white-ground" vase (Munich, 336), F–Reichhold, *pl.* 65. Demeter, *Iliad*, v. 500: Athena, Pindar, *Nem.*, x. 14, fr. 34. Homer, *Hymn Dem.*, 279, 302.

53. *Iliad*, v. 427. Aphrodite is golden-haired on the "white-ground" vase *BM Cat.* D 2.

54. Pindar, *Ol.* vi. 41; vii. 22; *Isthm.* vii. 49; *Pyth.* ii. 15 (Apollo); *Nem.* x. 14; fr. 34 (Athena); *Nem.* v. 54 (Charites).

55. Pindar, *Ol.* vi. 91.

56. Theophrastus, *Hist. Plant.* vi. 82. I owe to Professor W. D'Arcy Thompson of St. Andrews valuable help in this section, and also reference to G. Bissinger, *Welche Blume hat man sich unter den "Hyakinthos" zu denken.* Erlangen, 1880.

57. More commonly *ion* refers to dark hair, Pindar, *Ol.* vi. 50; *Isthm.* vii. (6) 33; *Pyth.* i. 1: Alcaeus fr. 55 Bergk. (describing Sappho); Simonides 21: or to dark eyes, Pindar, fr. 113; Hesychius (*ioglênos*).

58. The Lycian Xanthus, *Iliad*, ii. 877; v. 479.

59. Achilles' horses, *Iliad*, viii. 185; xix. 400; other horses, ix. 407; xi. 680.

60. Hair of Gauls, Diodorus, v. 32.

61. Dicaerchus, fr. 19 (Thebes). Aristophanes, *Lysistrata*, 43 (false complexions in fifth century).

62. Bacchylides, xix. 2 (Spartans); viii. 23, ix. 16 (athletes). For blond individuals in Sparta see note 66 below. From Theophrastus' description (*Peri lithôn* 37) of a stone called *xanthe* (which he contrasts with the "blood-red" hematite) as "not *xanthe* in color, but rather quite white, the color *which the Dorians call xanthon*," it would appear that the Dorians used the word for a lighter tint than other Greeks. This undercuts the contention (cf. Sir W. Ridgeway, *Anthropological Essays for E. B. Tylor* [Oxford, 1907], 303–4) that the Spartans were "Illyrians" with dark complexion, of a "neolithic" stock and "Pelasgian" antecedents, whatever that may mean.

63. Apollo's hair, Pindar, *Ol.* vi. 41; *Isthm.* vii. 49; *Pyth.* ii. 15 (golden); *Pyth.* ix. 5 (copious); *Pyth.* iii. 14; *Isthm.* i. 7 (uncut). Tyrtaeus fr. 3 Bergk (golden).

64. Herodotus, vii. 208–9 (Thermopylae): *Odyssey*, xix. 177. On the other hand the companions of Tlepolemus in Rhodes are "in threefold order" in the political sense, *Iliad*, ii. 655.

65. Pindar, *Nem.* ix. 40.

66. The Spartan poet Alcman describes Megalostrata as "fair-haired" (fr. 37 Bergk) and his own cousin Hegesichora had hair of "pure gold" about a "silver" face (fr. 13. 54–55 Bergk): compare the Homeric simile *Odyssey*, vi. 231–35.

67. Pindar, *Nem.* x. 4., cf. fr. 34; Pausanias, i. 14. 6 mentions a statue of Athena with gray eyes.

68. Zephyrus, Alcaeus, fr. 13 *b*. Bergk. Blond hair in Greek vase-paintings:—Fire-demon in underworld, *Arch. Zeitung*, i. pl. xv.; Eos, *M. d. Inst.*, II, pl. 48; *W. V.*, vi. pl. 7; Sleep and Death, Rayet-Collignon, fig. 78, *BM Cat.*, E12. Murray, *Designs from Greek Vases*, 1894, 7. fig. 1.; Peleus and Thetis, Berlin 2279 (H-M. xxiii); *BM Cat.*, E73; Maenads, Berlin, 2290 (H-M. xxi); boys and snake, *BM Cat.* D5. *White Athenian Vases*, pl. 16.

69. This red hair is sometimes very bright. Riezler 44 *a*, uses the same pigment for the man's robe and for the hair of both figures. Similarly, colored statues have "blond" or "red" hair, G. Dickens, *Catalogue of the Sculptures of the Acropolis Museum* (Cambridge, 1912), I No. 663.

70. Contrast of fair and dark hair: W. Riezler, *Weissgrundige attische Lekythen* (Munich, 1914), 32, young man fair, older dark; 47, 61–72, woman fair; 56, 62, boy, 73 one man, 71 all three figures fair. *Athens Nat. Mus.* 1688 (Collignon, *Cat.* pl. xlix) one fair girl and one dark.

71. Fair maid and dark mistress, Riezler, 49, 50, 83; fair mistress, 21, master, 28. Adamantius, *Physiognomica*, B 22, quotes from Polemo, a writer of the second century B.C., the following description of the "Greek type" of beauty:—"If any have preserved pure their Hellenic and Ionian breed, they are sufficiently tall men, broader than most, upright, well-knit, rather pale in complexion, *xanthoi*, with hair moderately *xanthon*, rather soft, gently curled: face square, lips thin, nose straight, eyes glistening . . . . with much light in them: for the Greek has the finest eye of all peoples."

72. Pindar, *Nem.* ix. 40.

73. Meleager, *Iliad*, ii. 642; Achilles, i. 197; xxiii. 141.

74. Agamede, *Iliad*, xi. 740. Rhadamanthys, *Odyssey*, iv. 564; vii. 323. Xanthus also as a Trojan's name, *Iliad*, v. 152, and Ganymedes, another Trojan, Homer, *Hymn Aphr.* 202.

75. There was another "Red King," Aleuas, in early Thessaly (Aristotle, fr. 113), whose clan was still powerful in the early fifth century (Herodotus, vii. 6, 172, 180, ix. 58).

76. In the same way Herodotus notes the Budini as exceptional among the other peoples of Scythia: they are "tall and numerous, all strongly gray-eyed and red-haired" (iv. 108).

77. *Odyssey*, vi. 230–235, xiii. 399 ff.; 430 ff.: Odysseus *was* fair; he *becomes* brunet, to the surprise of Telemachus (xvi. 181, 188) and of himself (207–8); but as he says, Athena *could* do what she pleased.

78. *Odyssey*, vi. 231 ff. Compare Alcman's description of Hegesichora, fr. xiii. 54–55 Bergk. For *hyakinthos* see note 56 above.

79. Yellow hair in fresco from Mycenae; Wace, *JHS* xli. 263; from Orchomenus, H. Bulle, *Orchomenus*, i. pl. XXVII 8, but G. Rodenwaldt, *Der Fries des Megaron von Mykenai* (Halle, 1921), 69 (A 10) thinks the paint may have been discolored. A white man in fresco; Rodenwaldt, *Tiryns*, ii. 118, pl. XI 6: this can hardly be accidental.

80. On the whole question of ancient complexion, V. de Lapouge, *L'Aryen* (Paris, 1899).

81. Alcmena vase, *BM Cat.* F 149; A. S. Murray, *JHS* xi. 225, pl. vi does not show this detail.

82. *Iliad*, xiii. 830; *Odyssey*, xi. 128. *Iliad*, vi. 27; iv. 141–47. When Athena restores the beauty of Penelope, she makes her taller, stouter, and "whiter than sawn ivory," *Odyssey*, xviii. 195–96.

83. Pelops' other bones were preserved at Olympia, Pausanias, vi. 22. 1; his shoulder blade was sent to the army before Troy, but was lost at sea; later it was fished up and identified, presumably by its ivory finish! Pausanias, v. 13. 4–6.

84. J. Gray and J. F. Tocher, *JRAI* xxx. 104–24.

85. Greek statues have also eyes painted or inlaid in red-brown, E. A. Gardner, *Ancient Athens* (London, 1902), 192.

86. Nireus son of Charopos (Achaean) *Iliad*, ii. 672; Charops son of Hippasos (Trojan), xi. 426. A later poet, Peisander, fr. 17, makes Menelaus gray-eyed as well as yellow-haired and tall.

87. I owe this information to Professor S. Langdon, of Oxford.

88. Blonds in Western Asia, von Luschan, *JRAI* xli. 221–44.

89. Wace and Thompson, *Nomads*, 271, quoting Sokolis, *Epetêris Parnassou* (1883), fr. 298.

90. The Graces (*Charites*) at Orchomenus, Pausanias, ix. 35. 1; that they were worshiped in the form of certain stones "fallen from heaven" (Paus. ix. 38. 1) did not prevent Pindar (*Nem.* v. 54) from describing them as blondes.

Notes to Chapter V

1. The pre-Minoan material from Cnossus has not yet been described fully, but its principal features are summarized by Sir Arthur Evans in *The Minoan Palace of Cnossus*, i (London, 1921), § 1, pp. 32–55; also ii. I, § 33 (1928).

2. The earlier material is collected by C. Blinkenberg, *Archaeologische Studien* (Copenhagen, 1904), 1 ff.: Kavvadias, *Proist. Arch.* Athens (1909).

3. British School at Athens, *Excavations of Phylakopi in Melos* (London, 1904); C. W. Blegen, *Korakou* (Boston, 1921).

4. Peet, *Stone and Bronze Ages*, figs. 55–60.

5. Sir W. M. F. Petrie, *Corpus of Prehistoric Pottery* (London, 1921), pls. XXVI–VII.

6. North African basketry, F. Ratzel, *History of Mankind* (E. T., London, 1898), iii. 262, 282 (pl. nos. 8, 18, 23).

7. Cist-graves at Marsa-Matruh, 140 m. west of Alexandria, contain rough pottery somewhat resembling Cycladic shapes, with stone vases which show the influence of the Twelfth Dynasty of Egypt: Oric Bates, *Ancient Egypt* (1915), i. 159–65.

8. A Sardinian example, Taramelli, *Mon. Ant.* xix. 397 ff., fig. 1 *a*.

9. Bell-beakers, Childe, *Dawn*, 122, fig. 59.

10. Sardinia, Taramelli, *Mon. Ant.* xix. 225 ff., pl. VI; 397 ff., figs. 14, 15–16 ff.: Sicily, Orsi, *BP It.* xvi. 65, pls. VI–VIII; Malta, Tagliaferro, *LAAA* iii. 1–21: Italy (Coppa Nevigata), Mosso, *Mon. Ant.* xix. 306, pls. IX-X: Spain and France, Childe, *Dawn*, fig. 59.

11. Lebanon, C. L. Woolley, *Syria*, ii (1921), 177, *LAAA* ix (1922), 42.

12. Crete: *CAH* pls. I 94 *a*; Evans, *Palace*, i. 41, fig. 8; Xanthoudides, *Vaulted Tombs of the Mesara* (Liverpool, 1924), pls. I, XVIII, XXV. Phaestus: Mosso, *Mon. Ant.* xix. 141–224.

13. Cyclades: Bent, *JHS* v. 54–56, figs. 10, 11, 13: Dümmler, *AM* 1886, 15–46: Bosanquet, *Phylakopi*. 82–84, pl. IV, 1–5, V: Edgar, *BSA* iii. 35 ff., 51 ff.

14. Telemachus' question, *Odyssey*, i. 173.

15. Evans, *JRAI* lv (Huxley Lecture): early Cycladic (figs. 3, 4) and Cretan ships (figs. 5, 6) compared with pre-dynastic Egyptian (figs. 1, 2). A. Koster, *Das antike Seewesen* (Berlin, 1923), Dussaud, *Civ. préhell.*, 415–16, and others have taken the high prow of the Cycladic boats for the high sternpost usual in Ægean vessels from the Early Iron Age to late classical times. But Sir Arthur Evans has satisfied me (examples published in *PM*, ii. 1, § 42) that the ensigns were at the prows.

16. Newberry, *LAAA* ii. 51; *Proc. BA* (Liverpool, 1923), 173.

17. Forest in Libya, Herodotus, iv. 175. H. Swainson Cowper, *The Hill of the Graces* (London, 1897).

18. D. Mackenzie, *Ausonia* (1900), iii. 18–48; *Memnon* (1909), ii. 3: T. E. Peet, *Stone and Bronze Ages*, chs. ix–xi.: *Rude Stone Monuments* (London, 1912); E. T. Leeds, *Archaeologia*, lxx. 201 *LAAA* ix. (1922), 29 ff. T. Ashby, *CAH* ii. 575 ff.

19. See Chapter III, note 73.

20. Corbel-vaulted tombs and other buildings in Crete and Libya, Evans, *JRAI* lv. 199; Xanthoudides, 134–35; Chr. Tsountas, *Eph.*, 1899, pl. VII.

21. Cretan corbel-vaulting, Xanthoudides, 136, pl. LX.

22. Early Nilotic, Libyan, and Egyptian relations with Minoan Crete: Evans, *JRAI* lv. 199 ff.: Newberry, *Proc. BA* (Liverpool), 1923, 173 ff.

23. Maceheads, Evans, *PM* I. 54; Ebers, *Real-lexikon d. Vorgeschichte* (Berlin), s. v. *Keule*. Tubular drill, Evans, *PM* II. 15–16.

24. *Tridacna* shell objects in Crete, Evans, *PM* I 48, fig. 13 (20) (described as "alabaster" but corrected *Huxley Lecture*, 1925–27 (=*JRAI* lv. 226), *PM* II 46. n. 2. *Tribulna* is common also in the Red Sea.

25. Blinkenberg, *Mém. Soc. Antiq. du Nord* (1896): Bossert, Nos. 8–20, 22–27: *CAH* pls. I 112 (Thessaly), 113 (Cyclades); G. Karo *in* Ebers, *Real-lexikon d. Vorgeschichte* (Berlin, 1926), s. v. *Idol.*, pl. 1. 3. 4.

26. Lycia: Peet, *LAAA* ii. 145 ff. pls. XXVI–VII: Ormerod, *BSA* xix. 48, fig. 1. Hissarlik, Schliemann, *Ilios* (London, 1880), 712, fig. 1551, upside down and mistaken for a "flower."

27. Adalia, Myres, *JRAI* xxx. 251, pl. XIV.

28. Hissarlik, Schliemann, *Ilios* (London, 1880), 712, fig. 1551; *Schl.* No. 6446.

29. Lydia, P-C, v (1890), 293, fig. 209.

30. Evans, *Proc. BA* (Newcastle), 1916, 1 ff. In Ebert's *Real-lexikon der Vorgeschichte* s. v. *Idol*, G. Karo distinguishes four "provinces" of these figures adjacent to the Ægean:—(1) "South Russian"; (2) "Thessalian," with Malta; (3) Trojan with Cypriote; (4) West Mediterranean. This seems a cross-division, as Malta belongs essentially to the West Mediterranean, and Thessaly, though perhaps influenced by the Ægean, derives its earliest culture from beyond the Danube (n. 52 below).

31. Malta, A. Mayr, *Die Insel Malta in Altertum* (Munich, 1909), 46–50, figs. 9–16; Th. Zammit, *Archaeologia*, lxvii. 127, lxviii. 263, lxx. 179; Evans, *PM* i. 45–52. Sicily (Villafrati), Peet. 207.

32. G. Contenau, *La Déesse nue Babylonienne* (Paris, 1914).

33. Naturalistic female figures in predynastic Egypt, Petrie, *Prehistoric Egypt*, 1920, pls. ii–vi.

34. The paired type is recorded also from a mound-site near Kaisarieh in central Asia Minor. Contenau, *Syria* viii (1927), 193; H. Grothe, *Meine Vorderasien Expedition* (Leipzig, 1911), cclxxxi. pl. XX 6 (Kul-tepe).

35. Myres, *Cesn. Hdbk.*, Nos. 2001–7 (primitive); 2009–16 ("Ishtar" types).

36. It is satisfactory to find the same conclusion independently by D. G. Hogarth, *Essays on Ægean Archaeology* (Oxford, 1927), 55–62.

37. Melos: the "Pelòs" type of pottery, *Phylakopi*, C. C. Edgar, *BSA* iii. 35 ff., 82–84, pls. IV 1–5, V.

38. Dümmler, *AM* xi. 15–46. This material is now in the Ashmolean Museum, Oxford.

39. Red-polished and black-polished pottery, Frankfort, *Studies* II; A. Lucas, *JRAI* lix. 113 ff.

40. Bandkeramik, Childe, *Dawn*, ch. xii.

41. Cycladic culture, *Phylakopi;* Dussaud, *Civ. préhell.*, 1914², ch. ii; Fimmen, 81–83. Vasiliki in Crete; H. Boyd (and others) *Gournia, Vasiliki, etc.*, (Philadelphia, 1908); Evans, *PM* I 27, fig. 46.

42. Double flute and lyre in Cyclades, Bossert, 16–20; in Cyprus, Ohnefalsch Richter, KBH (Berlin, 1893), 218, 330–31; Myres, *Cesn. Hdbk.*, 1023–28, 1264–65 in Crete (Ag. Tr.).

43. Intercourse between Egypt and Crete has been fully discussed by Sir Arthur Evans, *Palace*, i §§ 2, 3, 4, 14; *JRAI* lv (1925).

44. On these points, the second part of H. Frankfort, *Studies in Early Pottery of the Near East* (London, 1927), appeared too late to be of use. I can only express my general concurrence in Frankfort's far more detailed examination of these questions.

45. Thessaly, Chr. Tsountas, *Dimini and Sesklo* (in Greek; Athens, 1908); Wace and Thompson, *Pr. Th.*

46. The evidence is collected in C. W. Blegen, *Korakou* (Boston, 1921).

47. G. A. Papavasileiou, *On the ancient tombs of Euboea* (in Greek; Athens, 1910): Kavvadias, *Proist. Arch.* (Athens, 1909), 375.

48. Trade in obsidian from Melos to the Greek mainland, Bosanquet, *Phylakopi*, ch. viii; C. A. Wainwright, *Ancient Egypt* 1927, 77–93.

49. Frankfort, *Studies*, ii. 190–92. He notes, p. 118, a vase from Mochlos in Crete as "exceptional" and perhaps of mainland origin. (Seager, *Mochlos*, fig. 46, pl. XXI*b*.)

50. Early use of spiral ornament, Evans, *Palace*, i. 112, in Ægean; 114, derived from Butmir culture; 121–22, in Egypt; 200, Egyptian derivatives in Cretan design.

51. Spirals confused with concentric circles, Chr. Tsountas, *Ephemeris* (1889), 87–88, fig. 15, pl. VIII 1: Frankfort, *Studies*, ii. 50, 117. See also p. 452 below.

52. This "painted-ware" culture is most conveniently described, with full references, in Childe, *Dawn*, ch. xi; *JHS* xlii. 254: cf. E. H. Minns, *Scythians and Greeks*, ch. vii.: Thallon, *JHS* xxxix. 185.

53. The "kurgan" culture of the steppe folk, Childe, *Dawn*, ch. x.

54. References in Childe, *Dawn*, Chapter XI.; S. Casson, *Macedon*, 111–120.

55. Frankfort, *Studies*, ii. tends to exaggerate what he describes as "Danubian" influences in the Ægean, and does not clearly distinguish between the cultures of the different "Danubian" regions in the geographical sense.

56. Agia Marina, Soteriades, *Rév. Ét. Gr.*, 1912, 270 ff.; Fimmen, 75–76, 132–34.

57. Korakou, Blegen, *Korakou* (Boston, 1921); Asine, A. W. Persson, *Bull. soc. roy. de Lund*, 1922–23.

58. Orchomenus, H. Bulle, *Orchomenos* I (Abh. Münch. Akad., xxiv), 1907.

59. Tsani, Wace and Thompson, *Pr. Th.*, 135, *LAAA*, 1909, 152.

60. Oval houses, Fimmen, 39–41 (references esp. F. Noack, *Ovalhaus und Palast*, 1908).

61. House burial, Plato, *Minos*, 315*b*.

62. A. J. B. Wace and M. S. Thompson, *Prehistoric Thessaly* (Cambridge, 1912), 204, 239. An isolated example of mound burial is at Aphidna in Attica. Wide, *AM* (1896), 285, pl. xiii. ff., thirteen cist-graves with local "smear ware" and Middle Cycladic "painted ware."

63. Frankfort, *Studies*, ii. 141–42, applies to the interpretation of this wheel-made pottery the observation of van Gennep, *Rev. d'Ethn. et de Soc.* (1911), xx, 22 ff., that with the use of the potter's wheel, pot-making tends to become industrialized, and to pass from the hands of the women to those of the men. With this revolution the significance of pot fabrics obviously changes; for it ceases to be legitimate to infer from a change of pot technique any general replacement of population. See also Chapter VIII., n. 10.

64. Suggested origins for the so-called "Minyan" ware: Forsdyke, *JHS* xxxiv. 126 (Asiatic); Childe, *JHS* xxxv. 196 (indigenous); for its geographical distribution, D. Fimmen, *Die Kretisch-Mykenische Kultur* (Leipzig, 1921), 79. "Orchomenus-ware": Wace and Blegen, *BSA* xxii. 175 ff. Much confusion has been up by A. Lucas, *JRAI* lix. 113 ff., on the colors of ancient pottery, especially black, gray, and red wares.

65. It must however be noted that some confusion seems to have resulted from failure to distinguish the genuine "gray ware" at Hissarlik from other gray fabrics of various dates, which may very well be local, and are not adequate to explain the origin of the "gray ware" of Orchomenus, which moreover only appears at Hissarlik comparatively late, and in small quantity.

66. The "gray ware" did not however supersede the older fabrics altogether. Though it has its own range of inferior workmanship, especially at Orchomenus itself, the forms which travel far are few and uniform, the deep bowl on a high transversely moulded stem, and the wide cup or mixing bowl with two handles rising high above the rim. These had a vogue which looks more like the result of traffic than of dominion; and though it may be true that "trade follows the flag" even in early times, it remains to be shown *whose* flag the "gray-ware" exporters were following.

67. Argive and Corinthian derivatives of "gray ware": Blegen, *Korakou;* Wace and Blegen, *BSA* xxii. 175 ff.

68. Persson, *Asine* (1924–25), 78, assumes that no such "driving power" could have penetrated Thessaly from the north without leaving traces of its culture there; also that the northwestern highlands were impenetrable at this period. He consequently accepts, with qualifications, Forsdyke's suggestion (see note 64) that the "Minyan" gray ware was introduced from oversea, and represents an exodus from Asia Minor during the period when the Hatti folk were establishing themselves there. But is it necessary to identify the intruders with all the elements of the culture which accompanies them? The same question recurs when we discuss the "coming of the Dorians" in Chapter VII.

69. Bossert, 279.

70. "Gray ware" mould-made, Persson, *Asine* (1924–25), 67–68.

71. Childe, *JHS* (1915), 196 ff.

72. A good example is at Asine, where an oval house, and then a "megaron" house on top of it, lie within the limits of the "gray-ware" stratum, Persson, *Asine*, 75, pl. XXII.

73. F. Œlmann, *Haus und Hof im Altertum* (Berlin, 1927), i. 42 ff.

74. R. Maunier, *La Construction de la Maison en Kabylie* (Paris, 1926).

75. For example, Wace and Thompson, *Nomads*. pl. III 2 (Vlach tents).

76. Childe, *The Aryans*, pl. VIII i (neolithic house from Wurttemburg).

77. Wace and Thompson, *Nomads*, pl. XV 1, 2 (Vlach village); R. Munro, *Rambles and Studies in Bosnia*, etc. (Edinburgh, 1895), pls. I, VIII, XI, fig. 4; fig. 16 shows hip roof, and lean-to on the same stone plinth, and (near by) a gable hut with no walls at all.

78. W. Dörpfeld, *Troja und Ilion* (Athens, 1902), 171, fig. 63.

79. At Lianokladhi in Thessaly, one house has been attached to another at one corner, Wace and Thompson, *LAAA*. ii. pl. XXVIII.

80. Wace and Thompson, *Nomads*, pl. XI 3 (Samarina).

81. Munro, *Rambles and Studies*, 74, fig. 16.

82. Fimmen, fig. 39.

83. House-roofs in Balkan lands, J. Cvijič, *Le Péninsule Balcanique* (Paris, 1918), 228, 241, 254, 258 ff.

84. Herodotus, i. 173.

85. Tin at an early site in the Crisaean plain is reported by Mr. O. Davies.

86. Gold cup from Hissarlik, *Schl.* No. 5863; from Arcadia, Childe, *JHS* xliv 163: ornaments from Hissarlik, *Schl.* Nos. 5875–5966, 5978–99, 6003–45: from Mochlos, Seager, *Mochlos:* cups from Vaphio, Bossert, 242–47: signet rings from Mycenae, Bossert, 285–86, 324–26; Evans, *JHS* xlv. 1 ff.: Ægina treasure, Evans, *JHS* xiii (1893), 195 ff.

87. Both at Tiryns and at Mycenae, however, recent work has shown that the great fortresses were superimposed, in the fourteenth or thirteenth centuries, on open settlements. G. Karo, *Führer durch die Ruinen von Tiryns* (Athens, 1915), 11.

88. Thebes, G. Keramopoullos, *Eph.* (1909), 57–129; (1910), 177–251.

89. The Orchomenus tomb ceiling has an even closer parallel in a fresco pattern from the "Queen's Megaron" at Cnossus which Sir Arthur Evans, *Times Literary Supplement* (July 15, 1920), assigns to L. M. I(=1580–1450 B.C.).

90. Wace and Thompson, *Pr. Th.*, 79.

91. Wace, *BSA* xxv. 340 ff.: potsherd, gold leaf, beads, etc., 357–58, fig. 76: Evans, *JHS* xlv. 45, regarding these remains as "clearly intrusive," maintains the earlier date for the "Treasuries" on grounds of style, and remains of original equipment. But see also Droop, *LAAA* xiii. 43–48, for the two distinct problems involved in this controversy. Mr. Wace writes to me that "The Treasury of Atreus shows no sign of any repairs," but his earlier description of its threshold (quoted by Sir Arthur Evans, *Times Literary Supplement*, July 15, 1920) as "a patchwork of three small blocks" better fits the photographs of the threshold and the description, pp. 347–48, in *BSA* xxv. fig. 73. The threshold is of conglomerate, but its keystones are of limestone. The present side walls of the passage

do not bond with the façade; and their stones have a different dressing (figs. 71–72, pp. 342–46). I am indebted to Mr. O. Davies of Exeter College, Oxford, for independent observation of these details.

92. The "Danubian" elements which are prominent in the analysis of Ægean culture proposed by Frankfort, *Studies*, ii, are Danubian only in the most general sense as links between the Ægean and the highlands between the Middle Danube and the Adriatic. Even so, they include motives which are common also to the culture of the "black-earth" region between the Carpathians and the Black Sea; and "highly-polished carboniferous ware" (p. 42) is not easy to distinguish from the "black-ware" technique of northwestern Asia Minor, in the absence of detailed publication. If, as seems probable, the first culture of the Middle and Upper Danube itself ultimately originates from Asia Minor, it would seem obvious that intervening regions must be full of intermediary cultures locally specialized, but owing any similarities which they may show to the cultures of the Danube basin beyond, to primeval affinity rather than to any backwash of "Danubian" influence, unless the latter can be fully demonstrated, as in the much later "crusted wares" of the Third Thessalian Culture (p. 45). These are identical with fabrics of Moravian and Lower Austrian sites (Childe, *Dawn*, 185), and clearly betray a southward shift of peoples, of considerable range, but at a very much later date than Frankfort's view presumes.

Notes to Chapter VI

1. For these date-marks, and synchronisms between Mycenaean and Egyptian culture, see Fimmen, *Die kretisch-mykenische Kultur*, 181–215; Evans, *P. M.* I, Introduction.

2. Quite deliberately, and with very few exceptions, I have restricted my illustrations of the method of investigation here adopted, to legends included in George Grote's *History of Greece*, book I, Chapters IV–XV, partly to economize references, but chiefly because it has been my object to take up the question at the point where Grote stopped, describing the legends, as he says in his preface, "without presuming to measure how much or how little of historical matters these legends may contain"; compare his skeptical criticism in Chapter XIX. His great predecessor in this enquiry, Karl Ottfried Müller, had taken the bolder view, that it *is* the historian's business to investigate the historical content of such stories. How he set about it, his pioneer works on *Ægina* (1817), *Orchomenus and the Minyans* and *The Dorians* (1824) show, and, above all, his *Prolegomena to a Scientific Mythology* (1825); and it was in the course of an equally adventurous reconnaissance of the scenes of those legendary events—thirty years before Schliemann's work began—that he met his untimely death. Except his pupil and friend Ernst Curtius, Müller had no successor in this field, and indeed he was before his time. Now, after fifty years of archaeological research on prehistoric sites, it is not unreasonable to reopen the question of the historical content of Greek folk-memory.

3. Herodotus, ii. 143.

4. Grote, *History of Greece*, bk. I, ch. iv. "the same person who was gratified by the belief that he was descended from a god in the fifteenth generation, would have accounted it criminal insolence to affirm that a god was his father or grandfather."

5. I have dealt at greater length with the historical content of folk-memory in a Presidential Address to the Folklore Society, *Folklore*, xxxvii. 12–34.

6. Sir George Grey, *Polynesian Mythology* (London, 1855), vii.

7. Other instances are numerous: the Saxon pedigrees, going back coherently from King Alfred's time to the Saxon occupation of Britain—twenty-five generations—and occasionally beyond it; D. H. Haigh, *The Conquest of Britain by the Saxons* (London, 1861), ch. iii [I owe this reference to Professor F. J. Teggart of the University of California]; F. Seebohm, *Tribal Custom in Anglo-Saxon Law* (London, 1902): the pedigree of Arab "emirs" in northern Nigeria, H. R. Palmer *JRAI* xxxviii. 58: the royal pedigree of Uganda, of thirty-three generations, Stuhlmann, *Mit Emin Pascha ins Herz von Afrika*, pp. 191–94: natives of Mabuiag Island in Torres Straits (four or five generations only, the break being apparently due to a "change in the social system"). Here "Waria the present chief of Mabuiag, was so much impressed by the interest taken in the genealogies of the island that he determined to draw up a record for the use and guidance of his descendants"

unconsciously repeating the achievement of Ari Frodi in Iceland. W. H. R. Rivers, *Rep. Cambridge Anthr. Expedition to Torres Straits*, V (Cambridge, England, 1904), 126–28; *JRAI* xxx (1900), 74. Rivers repeatedly insists on "the great importance which is still attached to the genealogies in the regulation of social relations" (*Report*, p. 123), and "the essential accuracy of the genealogies" . . . . "This consistency is so remarkable that the whole system would be impossible except as the result of natural causes" (p. 126): they are "a faithful record of the past" (p. 127.)

Polynesian pedigrees in Samoa go back 33 generations at most, others 20–15, others 6; they are consistent with each other, corroborate events of constitutional history, and are linked by intermarriages with the long pedigrees of the Tonga islanders: A. Kramer, *Die Samoa-Inseln* (Stuttgart, 1903), I. 465–68.

In Uganda the royal pedigree goes back 33 generations. Ridgeway *EAG* i. 127 (quoting Stuhlmann, *Mit Emin Pascha ins Herz von Afrika* [Berlin, 1894], 191–94).

In Albania, Miss Durham tells me, pedigrees are habitually recited on All Souls Day: they go back 14–15 generations. Albanian pedigrees collected by Mrs. Hasluck show two "breaks" at about 1350 and 1750 A.D.; both were periods of commotion in Albania.

8. Herodotus, viii. 131. Fortunately the list is here continued upward beyond the "coming of the Dorians" to the generation of Heracles which (as we shall see p. 310) is approximately that of 1230 B.C.; and reckoning downward from that era, we find that Aristodemus the conqueror of Laconia falls in his proper place (fifth from Heracles) in the generation of 1100 B.C. All abnormality is therefore below this point.

9. The difference is illustrated by the double reckoning of Herodotus (i. 7) for the Heracleid dynasty of Lydia, "twenty-two generations or 505 years." The later is the regnal total: twenty-two generations of thirty years each would amount to 660 years.

10. J. A. Farrer, *Zululand and the Zulus* (London, 1879[4]); G. McCall Theal, *History of South Africa since 1795* (London, 1908).

11. Solygeia, Thucydides, iv. 42: the date of the invasion is given as 1098, Velleius, i. 13, and the leader Aletes was in the fifth generation from that of Heracles (1230); Corinth itself was occupied thirty years later, Schol. Pind. *Ol.* xiii. 12.

12. Neleus, Herodotus, ix. 97; Pausanias, vii. 4. 9: descendants of Agamemnon, iii. 2. 1. Strabo 401: Gephyraeans, Herodotus, v. 57–61; Isagoras, v. 66; Miltiades vi. 35 (given in detail by Marcellinus, *Life of Thucydides*, 2).

13. Gelo's pedigree, Herodotus, vii. 153. The name Telines in the same family is an echo of the name of Telos.

14. Pausanias, iii. 13. 2, notes the disastrous results of political troubles on the folk-memory of Messenia. On the other hand, as Clinton wrote (*Fasti Hellenici* Oxford, 1841,[3] ii. p. x) "The Trojan War is a cardinal point, from which we can trace history upwards for more than five centuries and a half up to Phoroneus and Inachus, and downwards for about 140 years to Codrus and Neleus. Here a void follows which it is impossible to fill" between Neleus and the Olympiad of Coroebus; "an interval filled with important transactions" which Chapters VII and VIII attempt to reconstitute.

15. H. M. Chadwick, *The Heroic Age* (Cambridge, 1912), 353 ff. has important comments on this and other social features of the period.

16. The link with Zeus is supplied from late sources (Ovid, *Met.* xiii. 144; Hyginus 109. 1) but Odysseus is "divine born" in Homer, and the denial of divine ancestry (W. Leaf, *Homer and History*, London, 1915, 12) is unwarranted.

17. *Iliad*, ii. 666.

18. Here, as throughout, the dates in oriental history are those adopted in the *Cambridge Ancient History*, except where reasons are given for alternatives.

19. *Iliad*, iii. 184–190.

20. Compare the fate of Kolskegg in the *Story of Burnt Njal* (G. W. Dasent's edition, Edinburgh, 1861, i. 256), who "fared east to Russia and was there one winter. Then he fared thence out to Micklegarth, and there took service with the Emperor. The last that was heard of him was, that he wedded a wife there and was captain over the Varangians." What Emperor? And what poetic fantasy, if we had not contemporary history of Constantinople and its imperial guard of Northmen!

21. Endymion, *Schol.* Apoll. Rhod., iv. 57.

22. *Iliad*, xxi. 450–54. Even if Attarissyas stands (as Professor Sayce thinks, *JHS* xlv. 161; *Proc. Oxford Branch Class. Ass.*, vi. 2) two generations higher than Forrer's identification of him with Atreus, this does not affect the historical significance of the father of Agamemnon, in view of the Achaean raid on Egypt in his time. Nor does any doubt thrown on the recognition of Taroisa with Troy diminish the value of Homeric tradition about Laomedon's fortress, fleet, and participation in a Phrygian campaign on the Sangarius when Priam was still young. It is the function and value of a hypothesis that it supplies a new point of view from which to examine familiar materials. Without Forrer's identifications few realized the historical importance of Atreus or Laomedon.

23. In *JHS* xxvii (1907), 172–74, I proposed to place these Pelasgians in the well-marked hill-country between the Propontis and the lower valley of the Hebrus, and this still seems to me most nearly in accord with the "Catalogue," *Iliad*, ii. 835–845. But in W. Leaf, *Troy* (London, 1912), chap. vii. the case is ably stated for including the Pelasgians in the "home district," and placing them along the coast between Troy and Antandrus which was in some sense Pelasgian for Herodotus (vii. 42). If this be accepted, the Thracians must be supposed to hold all the country north of the Propontis.

24. Amazon Wars: Pauly-Wissowa *s. v:* Roscher, *Lex. Gr. Rom. Myth: s. v.*

25. Ridgeway, *EAG*, 638–41 was aware of this longer perspective, but his Pelasgian theory prevented him from realizing its full significance. Here, too, it was Forrer's conjecture *MDOG*, 1924 (63), 10, that the Hatti word *ayalavas* represented the descriptive Greek term *aiolos*—whether a nickname as in Greek, or a status, or a category of mercenaries, that led to this review of Æolid pedigrees. But as stated here, the argument deals with pedigrees only, and remains significant and valid, even if Forrer has misread *ayalavas* as well as mistranslated it. That the word is written without a "determinative" by a Hatti scribe is only to be expected if it was in fact an epithet, signifying as much or as little as "Carian," applied to mercenaries in the days of Alcaeus, or *suisse* or *zouave* or *turco* in French.

26. Late Minoan remains at Thebes: (palace) Fimmen, 6 (with references): Keramopoullos, *Ephemeris* (1909), 57–129; (1910), 177–251 (tombs and small finds). Rodenwaldt, *Tiryns*, ii. 188–201 (date of frescoes); Plutarch, *De genio Socratis*, 5–7 (inscribed leaden plate from the "tomb of Alcmena").

27. The "Catalogue," *Iliad*, ii. 494–510, mentions thirty towns in Boeotia. No less than eighteen early sites have been examined more or less carefully already.

28. G. Glotz, *La Civilisation Egéenne* (Paris, 1923), ingeniously suggests that "Amenhotep III had perhaps contributed by his encouragement to launch Mycenae against Cnossus." For a "governor of the islands" under Thothmes III, see J. H. Breasted, *Ancient Times* (New York, 1914), 236, fig. 143.

28a. *Iliad*, iii. 144. As Theseus was driven out of Athens by Menestheus shortly before the war, it is not at all impossible that his mother, in her old age, should be making herself useful at a foreign court. Scyros, where Theseus died and was buried, was a port-of-call on the way to the Hellespont, and neutral ground, as we learn from the story of Achilles. Plutarch, *Theseus* 34, says that Hector captured Æthra at Istrus and brought her to Troy; but what was either Hector or Æthra doing at Istrus?

29. To the days of Erechtheus, about 1360, and Eumolpus (king of Eleusis, whose descendants were high priests there in classical times) belongs a Thracian raid, and probably other stories about widespread Thracian raids into Greece and the islands, which are all the more significant because they are never directly connected with the appearance of the "sons of Æolus" in this generation. There are earlier connections between Thrace and Attica, in the story of Oreithyia, daughter of Erechtheus, who was carried off to Thrace by Boreas, and in that of Procne and Tereus, a generation earlier (1360). To Erechtheus' time also belongs an invasion from Thebes, one generation therefore after Cadmus' arrival there, though the two stories are nowhere associated.

30. Another "son of Iasus" was a prince of Cyprus contemporary with Odysseus, *Odyssey*, xvii. 443.

31. This, we may note, suits very well the archaeological evidence for the "sixth city" at Hissarlik, with its fresh oversea connections.

32. Origin of the names Hellas and Hellene, J. B. Bury, *JHS* xi. 217 ff.

33. It is a further question how this West-Peloponnesian Endymion came to be identified with the "sleeping partner" of a Moon Goddess on Mount Latmus in Caria. At present our knowledge of western aggression on the Carian coast only goes back to Attarissyas of Ahhiyava; but if (as Sayce thinks) Attarissyas belongs to the generation of 1330, Endymion was his contemporary, and may have been one of his captains who "fell asleep" on foreign service.

34. Ætolian pedigree, Eusebius (Armenian version) xxxii; Strabo, 357; Pausanias, v. 1. 3–6; Apollodorus, i. 7. 6; Hecataeus fr. 341 (Athenaeus II, 35*b*).

35. Herodotus, v. 58 says that the Greek-speaking neighbors of the Cadmeians "changed the form of a few of them"; and that the Cadmeians themselves "changed the style of their letters when they changed their language" and learned Greek. Æschylus, like Herodotus, thought that the Cadmeians spoke Greek, but a different dialect from that of the armies of the Seven (*Septem*, 72, 170: cf. p. 158, n. 133.)

The "Cadmeian letters" shown to Herodotus in the temple of Ismenian Apollo at Thebes were "most of them like the Ionian letters." As he could read these inscriptions, which were in Greek hexameter verse, it is safe to infer that they were of the "western" or "Chalcidic" alphabet, actually used in Boeotia in early Hellenic times. As they were engraved on tripods, it has been commonly supposed that they belonged to the Early Iron-Age culture which made large use of this kind of votive offering. But it is not as yet possible to define an upper limit of date for their use; there are tripods in Late Minoan tombs in Cyprus (*BM Exc. Cyprus*, fig. 30) as well as four-footed stands (figs. 18, 24): and at Isopata near Cnossus (Evans, *Royal Tombs of Cnossus* [*Archaeologia*, lix., fig. 38, pl. LXXXIX*a*]): so far as the form of the objects goes, they may quite well be of the thirteenth or fourteenth century, well within the Cadmeian régime.

36. Another puzzle is the statement of Herodotus (i. 56) that "in the days of Deucalion" the ancestors of the Dorians lived in Phthia, and moved thence into Histiaeotis "in the days of Dorus son of Hellen." Were there then (and in what sense) Dorians before Dorus?

37. Diodorus, iv. 60. 2.

38. Strabo, 477, Minos was an "alien" in Crete, according to some.

39. "Beehive" tombs in Thessaly, Wace and Thompson, *Pr. Th.* (Index).

40. The history of the Danube as an early waterway has been discussed by Childe, *Antiquity*, i. (1927), 79–91.

41. "Baleful signs in a folded tablet," *Iliad*, vi. 168–69. Personal marks on lottery-stones, *Il.* vii. 175–89.

42. No town in this district is included in the baronies of Argos or Mycenae or Lacedaemon in the *Catalogue* (*Iliad*, ii. 559–85). Was it perhaps here that Menelaus was prepared to "sack one fort" to make room for Odysseus? *Odyssey*, iv. 174–77.

43. This violent but brief spell of copious rainfall seems to be the southeastern equivalent of the well established "high-water catastrophe" which overfilled the Swiss lake basins and destroyed temporarily many of the Bronze-Age lake-villages. By comparison of archaeological evidence this deluge is placed about 1300, rather later than the genealogical date here proposed; but the fact is certain, and probably the genealogical argument will serve to correct the archaeological inference. C. E. P. Brooks, *Climate through the Ages* (London, 1926), 339, 363, quoting H. Gams and R. Nordhagen, *Geogr. Gesellsch. Landesk. Forschungen* (Munich, 1923), Heft 23.

44. That the story of Deucalion's refuge on Parnassus is duplicated in Thessalian legend, with a similar "Ararat" on Mount Othrys (Schol. Pindar, *Ol.* ix. 64) is only what is to be expected, in view of the physical structure of the Thessalian plain, and of the other legend, preserved by Herodotus (vii. 129), that Thessaly was formerly "open sea" (*pelagos*) and that the gorge of Tempe was eventually opened (or reopened?) by earthquake. There is considerable fenland and some standing water (the *Lacus Boebeis*) in the district of eastern Thessaly called Pelasgiotis. If the name of the Pelasgi has anything to do with *pelagos*, as has been suggested, this may be the reason for its occurrence here.

That the "flood" or "downpour" was general, is indicated by other variants of the story, with refuges on Geraneia (Pausanias, i. 40. 1), Athos (Servius on Virgil, *Ecl.* vi. 41), and Etna (Hyginus, 153). The "Parian Marble" says that Deucalion was driven *down* from Parnassus into Attica by excessive rain; perhaps an Athenian legend. From the moment of "Deucalion's flood" these southeastern precursors of "Ionic" dialects were, moreover, secluded from all dialects north of the flooded Copais, and free to develop independently. And as the Cadmeian occupation of Thebes occurred only a generation after the return of Deucalion into the low country north of the flooded area, and at least a generation before the Minyan régime began at Orchomenus, to which the great drainage-works in the Copais were ascribed by Greek tradition, a further barrier was interposed forthwith; more especially if it was a northward thrust of the Cadmeians that drove the ancestors of the Dorians (as Herodotus says) from eastern Thessaly into the highlands of Pindus. Later, as we have already seen (p. 153), the Ionians of northeastern Peloponnese were driven back, in part at least, into Attica, by newcomers, probably Arcadian-speaking, from the west; and a similar concentration on the north resulted (as the legend of the Gephyraean clan shows) from the collapse of the Cadmeian régime and the "migration from Arne" led by Cadmeian refugees, which established Æolic speech in Boeotia south of the Copais.

On the prehistoric climate of Greece in general, see Myres, *Proc. Int. Geogr. Congress* (Cambridge, 1928).

45. Cadmeians expelled from Boeotia but reestablished by the "migration from Arne," Strabo, 401.

Notes to Chapter VII

1. Archaeological evidence for a Danube highway in early times: Childe, *Antiquity*, i (1927), 79–91.

2. Other examples are the Gauls in Galatia, the Saxons in Britain, and the Moors in Spain. For the extent of this Phrygian régime, Myres, *LAAA*, i. 13–16, a "Midas"-inscription from Tyana.

3. As this page goes to press comes news of Mr. Heurtley's excavation of two stratified sites in Chalcidice, to be published shortly in *BSA*.

4. For Ionian cults, F. Bilabel, *Die Ionische Colonisation* (Leipzig, 1920).

5. The possibility of a Minoan epic as forerunner of the Homeric, Evans, *JHS* (1912), xxxii (Presidential Address).

6. On the Trojan side, the place of the Lydians is taken by the Maeonians; Paeonia extends as far west as the Axius river; and, since Paphlagonia borders on the home district of Troy, there is no Bithynia yet such as resulted from the later spread of Thracian tribes into Asia Minor (Herodotus, vii. 75).

7. W. Reichel, *Ueber Homerischen Waffen* (Vienna, 1894 [1901²]) gave the first full comparison of Homeric texts with the Minoan data. W. Helbig's *Homerisches Epos* (Leipzig, 1886²) states fully the Hellenic evidence, but was written too soon to do justice to Minoan discoveries. Later discussions: M. S. Thompson, *LAAA* V, 1ff., H. L. Lorimer, *LAAA*, xv. 89.

8. Round shield carried by Shardana mercenaries of Rameses II, G. Roeder, *Ægypter und Hethiter* (Leipzig, 1919), 52, fig. 7: H. Bossert, *Altkreta* (1923²) No. 345: Sea-raider enemies of Rameses III, D. Fimmen, *Die kretisch-mykenische Kultur* (Leipzig, 1921), fig. 188: Bossert, fig. 343.

9. On a Late Minoan ivory mirror-handle from Enkomi in Cyprus, a warrior carrying round shield and "leaf-shaped" sword (p. 431) wears also a jointed cuirass like that of the Sea-raiders, and a helmet apparently armed with boar tusks, of regular Mycenaean type: *BM Exc. Cyprus*, pl. II. 872: the helmet, II. 1340 is more clearly modeled; other examples Bossert, 226–27.

10. Greaves, *BM Exc. Cyprus*, fig. 26.

11. Late use of large shields hung from the neck, Reichel, p. 25.

12. The earliest representation of the "Boeotian" shield is on a gold ring from a very late Minoan tomb in Ægina, Evans, *JHS* xiii. 212, fig. 22*a*.

13. Homeric houses: earlier views are summarized in J. L. Myres, *JHS*. xx. 128; later interpretations, G. Dickens, *JHS* xxiii. 293; E. A. Gardner, *JHS* xxi. 325. S. E. Bassett, *AJA* II. xxiii. 288–311; B. C. Rider, *The Greek House* (Cambridge, 1913.)

Compare the Philistine exhibit of Samson's strength too dangerously near the "pillars of the roof," R. A. S. Macalister, *The Philistines* (London, 1913), 123–24.

Architectural criticism of the "*megaron*" type of dwelling, F. Œlmann, *Jahrb. d. Inst.*, xxvii. 38–51.

14. Hellenic houses: E. A. Gardner, *JHS* xxi. 325 ff.

15. *Thaptein* for funerals generally, Diogenes Laertius, ix. 810; for burial, as in Persia, Lucian, *de Luctu*, 21: for cremation, *Iliad*, xxiii. 71; *Odyssey*, xii. 11; Appian *Hann.* 35: for any disposal of the dead body (hung on a tree in a leather bag) Ælian, *V. H.* iv. 1. On this matter I am indebted for much help to Mr. Roderick MacKenzie of St. John's College, Oxford.

16. *Taricheuein* "to embalm": Diogenes Laertius, ix. 84; Lucian, *de Luctu*. 21: *tarchuein* in preparing a corpse for mound burial, *Iliad*, vii. 85; at a distance, *Iliad*, xvi. 456, 674; but after transit, not before. The suggestion that the corpse was "toasted" at a fire, and that this rite should be reckoned as a variety of cremation is more ingenious than convincing, W. Dörpfeld, *Mélanges Nicole* (1905), 99 ff. *Neue Jahrbücher*, xxix (1912), 1 ff.; *Alt-Ithaka* (Munich, 1927), i. 211: J. Zehetmeier, *Beitr. z. Kunstgeschichte*, xxxv (Leipzig, 1907), 196 ff.

17. Occasionally ashes and burnt wood have been found in Minoan tombs in Crete, but there is no instance of calcined bones; if fires were lighted in chamber-tombs it was either to ventilate them (Xanthoudides, *Ephemeris*, 1912, 23; *Vaulted Tombs*, 134–5: Fimmen, 65–66); or at most for some rite other than cremation (Evans, *Tomb of the Double Axes*, 13–28; *Prehistoric Tombs*, 36–143).

18. J. Overbeck, *Die antike Schriftquellen* (Leipzig, 1868), Nos. 57–66 (Treasury of Trophonius): Pausanias, ix. 37. 4 (of Hyrieus at Delphi); ix. 11. 1 (of Alcmena at Thebes): Schol. Aristophanes, *Clouds*, 508 (of Augeias in Elis).

19. Paton, *JHS* viii. 64–82; Paton and Myres, *JHS* xvi. 242 ff.

20. The fibulae and pottery from these graves are discussed in their respective contexts hereafter (pp. 410, 449).

21. Foundation date of Ephesus, Pausanias, vii. 2. 5; of Miletus, Herodotus, ii. 143 (genealogy of Hecataeus).

22. Carians "foreign-speaking," *barbarophonoi*, *Iliad*, ii. 867; with topographical details of the neighborhood of Miletus, so exceptionally full as to suggest that the district, like the Cayster valley (ii. 461), was already familiar when the *Catalogue* was composed. But it no longer follows that the *Catalogue* is "late."

23. Lydian tumuli, P-C, v (1890), figs. 193–202. The "Tomb of Alyattes" (Herodotus, i. 93: D. G. Hogarth, "*Ionia and the East* [Oxford, 1909], 76) was explored by von Olfers, *Monatsb. Berl. Ak. Wiss.* (1854), *Abh.* (1858), 539–56; later by Dennis, cf. C. H. Smith, *CR* i (1887), 82. The "Tomb of Tantalus" in Mount Sipylus is similar, P-C, v. figs. 14–17.

24. Unfortunately the pottery from excavations at Sardis is not yet fully published.

25. The Greek "List of Sea-powers" is quoted by Eusebius from Diodorus; see Myres, *JHS* xxvi. 84.

26. Heracles and a Heracleid dynasty in Lydia, Herodotus, i. vii.

27. Colini, *BP It.* xxiv. 1 ff. (Remedello).

28. Tree-burial in ancient Colchis, Ælian, *V. H.* iv. 1; Nymphodorus, fr. 17, *FGH* ii. 280.

29. For details of early European cremations, V. G. Childe, *Dawn* (London, 1925), Index *s. v.* "Burial Rites"; *Aryans* (London, 1926), *s. v.* "Cremation" and especially pp. 144–48.

30. Various modes of disposal in Hungary, Childe, *Dawn*, 198 (references).

31. Cremation-cave at Gezer, Macalister, *Gezer*, i. 74–77, 285–88.

32. Alpine-Armenoid cremation: Childe, *Aryans*, 147 corrects the earlier generalizations of Myres, *CAH* i. 73–81, and Christian, *MAG Wien.*, liv. 42.

33. Childe, *Dawn*, fig. 64.

34. Taramelli, *Mon. Ant.*, xix. 397–540; skulls, 530–34.

35. For example, at Athens, in the Dipylon cemetery there is no cremation; among the graves at Cynosarges, of the same period, there was one urn containing ashes, C. H. Smith, *BSA* ii. 25.

36. Thracian funerary customs, Herodotus, v. 8.

37. Spartan royal funerals, Herodotus, vi. 58; other burials, Plutarch, *Lycurgus*, 27; *Agesilaus*, 40: Xenophon, *de Rep. Lac.*, xiv. 9 only says that the kings were "treated like heroes."

38. This important material is fully published in W. Dörpfeld, *Alt-Ithaka*, 2 vols. (Munich, 1927) i. I discussed it in detail, *Antiquaries Journal*, viii. 538–41.

39. P. Kavvadias, *Praktika* (1912), 250 ff. There is also Mycenaean painted pottery from the Choerospilia cave in Leucas itself, and a few sherds from the Amali hill overlooking the Nidri plain. Mr. Oliver Davies calls my attention, however, to other sites where the "gray-ware" culture seems to have persisted till the Iron Age, uncontaminated with Mycenaean elements.

40. *Iliad*, x. 415; xi. 166, 371–72: "man-wrought" mound of Ilus (who belonged to the generation of 1360); ii. 793, mound of Æsyetes.

41. "Placing foundations in front" of a mound, *Iliad*, xxiii. 255.

42. Chambered tumuli at Gordium, Koerte, *Gordion* (Berlin, 1904).

43. The home-land of "Hellenes and Achaeans," *Iliad*, ii. 684, cf. 530; cremation-graves at Halos, Wace and Thompson, *BSA*. xviii (1911–12), 1 ff.

44. A close parallel to the coalescent mounds at Halos is the unsymmetrical enlargement of the circular and rectangular burial places of site "S" in Leucas (note 38 above). Even on site "R" the ring-walls are but a few feet apart.

45. Minoan men's dress, Bossert, 58–59, 78, 87–97, 133–36 etc.; an Egyptian sketch of it, 333.

46. The men's vest (*chiton*) in Homer is close-fitting "like the skin of an onion" (*Odyssey*, xix. 232–33): a man dressing or undressing sits up in bed and "plunges into" it, or "emerges" from it (*Iliad*, ii. 42, x. 21, x. 131; *Odyssey*, i. 437, xv. 60–61). The verb is used of entering a house (*Od.* xvii. 336), a gateway (*Il.* xxii. 99), a grave (*Il.* vi. 19), the sea (*Il.* xviii. 140), or a crowd (*Od.* xv. 328), and of a sword plunged into a man's body (*Il.* xvi. 340).

47. Men's vest: frescoes from Mycenae and Tiryns, Rodenwaldt, *Fries*, pls. I, II, III, fig. 28: from Mycenae, Rostovtseff, *History*, i. pl. LVI, fig. 3: from Tiryns, *CAH* pls. I 158*d*: charioteer and warriors from Tiryns, Bossert, 213, 216, 217: from Mycenae, 220: "Warrior-vase" Bossert, 265–66: Cypriote statues, Myres, *Cesn. Hdbk.*, Nos. 1040–48, 1052, 1054–57, 1267, 1356–57, 1361. A late example of this vest, looser and sleeveless, is shown on an Athenian white-ground vase of the fifth century, R. C. Bosanquet, *JHS* xix. pl. III.

48. Disuse of loin cloth at Olympic Games, Thucydides, i. 6: ceremonial loin cloth in Cyprus, Myres, *Cesn. Hdbk.*, Nos. 1045–47; Ohnefalsch-Richter, *KBH*, pl. CCXIV 15.

49. The woman's undergarment (*peplos*) is close-fitting (*Iliad*, xxi. 507), fastened with "inserted" clasps (*enetai*) and a girdle (*Iliad*, xiv. 178–80), or twelve gold *peronai* "fitted with hooked catches" (*Od.*, xviii. 293); it "falls to the ground" when discarded for a man's *chiton* (*Iliad*, v. 734–36, viii. 385–87); its material is "soft" and the same epithet *heanon* is applied to linen (*Il.* xviii. 352, xxiii. 254) and tin (*Il.* xviii. 613).

50. Bossert, 56–57, 69, 71–75, 102–6, 117–18, 131–32, 136, 140 etc.

51. "Ionian" and "Carian" dress for women, Herodotus, v. 88; "Carian" armor, i. 171.

52. Woman's vest, Bossert, 266: F. Poulsen, *Der Orient und die fruh-griechische Kunst* (Leipzig, 1912), figs. 53, 57, "Hittite" ivories: 104–6 Ephesus, 172 Praesus: Ethel V. Abrahams, *Greek Dress* (London, 1908), fig. 8: on early Greek vases, *Louvre*, F. 13, 28, 36, 37, 60, 102: on ivories from Ephesus, *BM Exc. Eph.* (1908), pls. XXXI, 6, 7, XXIV, XIX 6: on a polychrome plate from Thera, Dragendorff, *Thera*, ii. pl. II: on a fifth-century vase, Bosanquet, *JHS* xix. 169, pl. III: open down the front, like Penelope's robe, *Louvre Cat.*, F. 101.

53. Cloak worn over vest, in Homer, by men, *Iliad*, ii. 43; *Odyssey*, v. 229, viii. 84: fastened with a pin, *Il.* x. 133, *Od.* xix. 226: worn by a woman, without mention of vest, *Od.* v. 230. In *Od.* v. 230 a woman on rising puts on a "great white cloak" and secures it with a girdle, without express mention of a vest; but it was to go out of doors early, so the poet presumes her to be already "dressed."

54. Belated use of jacket-and-skirt: H. L. Lorimer, *Proc. Class. Ass.* (1912), 1–13; the Cypriote figures quoted (p. 11) are in Myres, *Cesn. Hdbk.*, 2026–27. Compare the lead figures from Sparta, M. N. Tod and A. J. B. Wace, *Catalogue of the Sparta Museum* (Oxford, 1906), figs. 79–81, and others from the Orthia sanctuary, Droop, *BSA*, xiii. 112–23.

In Early Iron-Age graves at Tiryns, the bodies have usually a single dress-pin on the breast: this may have held a cloak, but certainly not a "Doric chiton." W. Müller, *Tiryns*, i. 127–59.

55. *Odyssey*, xviii. 293. A preliminary hint of date is given by Eurydamas' gift of earrings in the same passage (l. 298) "with three eyeballs, mulberrylike." These have no Minoan counterpart, but close parallel in a type composed of three or more golden balls, sometimes decorated in the granulated technique, and characteristic of the Early Iron Age of Cyprus. Ohnefalsch-Richter, *KBH*, pl. CLXXXII 1; Myres and Ohnefalsch-Richter, *Cyprus Museum Catalogue*, pl. VII, 8003; Myres, *Cesn. Hdbk.*, Nos. 3169–75.

56. Primitive blanket costume in the Mediterranean, D. Mackenzie, *BSA* xii. 233–49; Myres, *BSA* ix. 356 ff., pls. vii-viii. On the "siege-scene" vase from Mycenae, two men wear nothing but a blanket pinned together over one shoulder. H. R. Hall, *JHS* xxxi. 119–23, fig. 5 calls attention to this and other indications that a foreign enemy is represented.

57. In this discussion of the fibulae my indebtedness to Ch. Blinkenberg, *Fibules grecques et orientales* (Copenhagen, 1926), is obvious. I have only dealt with this topic at so great a length because it seems to me that by regrouping some of Blinkenberg's types into larger units, and by discounting the evidence from sanctuaries in tracing their geographical range, it is possible to reach historical results of wide significance.

58. Our own word "brooch" formerly meant a skewer as well as a dress-pin: the Latin *fibula* (*figibula*) means "fixer" and is used for the shin bone—a ready-made skewer—as well as for a brooch; and in the Homeric vocabulary *peronê*, *porpê*, and *enetê* are alike "perforators" for "insertion." But none of these are originally or necessarily "fibulae" in the archaeological sense of "safety-pins": Homeric people evidently wore pins that were by no means "safe": *Iliad*, v. 425.

59. Cypriote pins of the Bronze Age, Myres, *Cesn. Hdbk.*, 4674–76 (plain head), 4677–91 (eyelet pin).

60. Childe, *Dawn*, 216, still followed Kossinna, *Die Indogermanen* (1921), though with subsequent reservations, p. 318, in regarding the fibula with spiral spring as a local "Upper Italian" modification for the northern eyelet-fibula. Compare H. T. Wade-Gery, *CAH* ii. 523. But this was before the publication of Blinkenberg's monograph, reviewing which (*JHS* xlvii. 161) Childe admits that Ægean origin deserves "more sympathetic consideration than it has hitherto received," and that "given the violin-bow fibula in Greece, the local evolution of all the later Hellenic types is perfectly straightforward, with the sole exception of the spectacle brooch"; and "curiously enough, the leading German authority, Beltz, considers the [spectacle] type to be of Greek origin."

61. Harriet Boyd, *University of Pennsylvania: Transactions of Department of Archaeology*, i. (1904), 17; (Blinkenberg (I. 14) quotes (pp. 43–44) well established Italian and Sicilian derivatives from the same northern prototype.

62. Hooked dress-pins: Xanthoudides, *Vaulted Tombs* (Liverpool, 1924), pl. LVI 1957; Evans, *Prehistoric Tombs of Cnossus*, 151, fig. 129; Blinkenberg, fig. 5. A similar pin but furnished with a large head appears fastening the corset of a Minoan woman on a statuette said to have been found in Crete. A. J. B. Wace, *A Cretan Statuette in the Fitzwilliam Museum* (Cambridge, 1927), 10. This "bent-head" device is found also at Gezer (Macalister, *Gezer*, iii. pl. CXXXIII 29) and in tombs near Carchemish (C. L. Woolley, *LAAA* vi [1914], 87–98, pl. XXIV) which cannot be later than 1500 B.C., and may be considerably earlier; but as these are usually eyelet pins there is nothing at present to connect them with the Minoan hooked pin.

63. Blinkenberg, fig. 6 (Arcadia), Type II. 1 h. (Ægina).

64. Blinkenberg, Type I.

65. Blinkenberg, Type I, 1. e., Paribeni, *BPIt.* xxx. 30; xxxv. 178, fig. 31. Other examples, R. Munro, *The Lake Dwellings of Europe* (London, 1890), fig. 64.

66. For former controversies as to the fibula's place of origin, full references are given by Blinkenberg, p. 38 n.

67. Blinkenberg, Type I 10–12, II 15. Later varieties (II 16–23) extend the vogue of this "stilted" type to Attic Salamis, Lesbos, Locris. For the date and significance of this type, see p. 413.

68. Blinkenberg, Type I 11 ("elbow"): I 12 (with second spring).

69. Blinkenberg, Type I 13, cf. fig. 220 from Rhodes.

70. Blinkenberg, p. 56; J. de Morgan, *Préhistoire orientale* III, fig. 324 (5).

71. V. Parvan, *Getica* (Bucarest, 1926), pl. XII 2, 3.

72. At their upper time-limit, fibulae do not occur at all in those tombs at Mycenae which contain objects imported from Egypt, and the latest of these

belongs to the time of Amenhotep III (1411–1375). As lower limit, the "stilted" fibulae had already reached Cyprus before the destruction of the Late Minoan colonies about 1200.

73. Blinkenberg, Types II 1–9. These have their bow continuous from spring to catch, and are therefore distinct from, and morphologically prior to, those in which a "pilaster" bow, only slightly curved, is "stilted" at both ends (II 10–12); still further removed from the widespread varieties with the bow more or less swollen and "leech-shaped" (II 13, 14). Blinkenberg's Type IX is a late and local Boeotian derivative from this series, influenced by the bronze-engraver's art of the contemporary "catch-plate" fibulae in his Type VIII (see pp. 414–416 and note 80). Types II 1–9 occur also at Olympia, Delphi, the Argive Heraeum, the Orthia sanctuary in Sparta, and the sanctuary of Zeus Thaulius in South Thessaly; in Early Iron-Age contexts at Lousoi in Arcadia, and the Ephesian Artemisium. Among miniature fibulae it remains common later still (Blinkenberg, p. 62).

74. Blinkenberg, Types II 15–23: compare III 1, 2 which retain the twisted bow, though the catch is becoming a flat plate as in IV.

75. In these the stilt is exaggerated, and sometimes in two stages XIII 1*d*, *f*, *k*. They pass over into Syria (Blinkenberg XIII 1*b*, *c*). A doubly stilted example from Curium in Cyprus was "found with Mycenaean vases and no later objects," *BM Exc. Cyprus* (1900), 68, fig. 92; Blinkenberg, XIII 1. *d*. cf. Myres, *Cesn. Hdbk*, 4734.

76. Blinkenberg, Type XIII, p. 234 "closely related to II 19" (earliest stilted fibulae from Vrokastro in Crete, and Attic Salamis); a large proportion of the fibulae grouped under II are from Cyprus. An example from the Orthia sanctuary at Sparta is noted as a "subsequent" type, and may be a visitor; Droop, *BSA* xiii. 122, fig. 3, *e*.

77. Animal-shaped fibulae, *Odyssey*, xix. 226–31. The only fibula from the Late Minoan site outside Sparta, where Menelaus and Helen were worshiped later as heroes, had the bow modeled as a lion (Blinkenberg, Type XVI 2; Dawkins, *BSA* xv. 147, pls. 9, 7). For other animal fibulae of early "pivoted" type from Crete and Sicily, see Blinkenberg, figs. 8 and 29.

78. "Cicada" fibulae, Blinkenberg, Type XVI 3, from Attica, Ephesus, and Locri in South Italy and the early quotation about Samian dress in Athenaeus 12. 575E: but compare F. Studniczka in Thucydides, ed. Classen-Steub[5], p. 390 and figs. 2–3. Were the Athenian "cicada" ornaments fibulae at all, and if so how were they worn in the hair?

79. Many fibulae of central Greece have the bow so swollen in the middle that it appears lozenge-shaped in top view. In some of the fibulae at Halos the lateral angles are exaggerated so that the top view of the bow is cross-shaped. But this is a decorative detail in a type which admitted great variety of bow design.

80. The "catch-plate" group of fibulae includes Blinkenberg's Types III (intermediate), IV (insular), V (Epirote), VI (Thessalian), VII (Helladic), VIII (Attic-Boeotian). His "Epirote" Type V passes over into XI (Italic): his various "Boeotian" Types IX show the influence of the engraved art of Type VIII on a distinct and older tradition derived from the symmetrical Type II which he has rightly named "Sub-Mycenaean." Blinkenberg is content to assign the full devel-

opment of these divergent types, with stilt and catch plate, respectively, to the eighth century; but the Cypriote evidence already noted makes the tenth or eleventh more likely, and the divergence may well have begun in the twelfth.

81. The forms of the bow, and the height of the stilt above the spring may differ greatly, even within the principal varieties of catch plate; and are of less importance either in typology or in geographical range. Principal reasons for this variability are (1) the custom of threading various kinds of beads on a plain wire bow, and imitating these decorations in solid bronze; (2) transfigurement of the swollen "pilaster" into boat-shaped or spoon-shaped bows; (3) flattening of the bow into a vertical or transverse plate on which to display engraved designs.

82. In Macedonia, one "Thessalian" fibula from Chauchitza, Blinkenberg, VIII 4. 1; another from Pateli, of Blinkenberg's "Helladic" Type VII 6 *c*, closely allied to it.

83. Blinkenberg V: from its distribution in west central and western Greece, it is clearly a local development of the catch-plate fibula.

84. Blinkenberg's "Sub-Mycenaean" Type II 1–9 together with his II 10–14 which are stilted at both ends, and have the bow more or less swollen in the middle. The rest of his "Sub-Mycenaean" Types (II 15–23) which have a stilt only between bow and catch, have been discussed already as prototypes of our "mid-Ægean" series.

85. This is Blinkenberg's "Asiatic" type (XII), which he rightly derives from Type II (p. 206), though the two groups unavoidably stand apart in his classification.

86. Blinkenberg, Type III 3 and 4: in III 3, recorded from Boeotia, Argos (Heraeum), and Arcadia, the bow is of twisted wire, an early feature, and the catch is large enough to spoil the symmetry. One Macedonian specimen is from a tomb of the early sixth century at Aivasil (E. A. Gardner, *BSA* xxiii. 19 ff., fig. 12); two from graves at Chauchitsa (Casson, *Macedonia*, 146, fig. 52). In III 6*a* (from Crete) a more symmetrical result is obtained by the use of two supplementary spirals.

87. Casson, *Macedonia*, 133; W. A. Heurtley, *LAAA*, xii. 15–26. A very simple "semi-circular" fibula remained in use at Chauchitza in Macedonia (Casson, *Antiquaries Journal*, i. (1921), pl. VII, figs. 2–5), with a "Thessalian" (2–7) and a fully formed "Asiatic" fibula (2–6). The fibulae of Thrace are discussed by R. Popoff, *Le Trésor d'argent de Boukiovtzi* (near Orsova on the lower Danube) (Sophia 1926): the symmetrical types resembling those of Herzegovina (Truhelka, *Wiss. Mitth. aus Bosnien* VIII, 25 fig. 40) and illustrated also from Dodona and Olympia, are earlier than those which resemble maturer Hellenic forms from Tempe and Elis.

88. Blinkenberg, XII 17 f.

89. Blinkenberg, XII 1 g, from Ægina.

90. In Syria and Cyprus the stiff bilateral decoration of the bow concentrates the curvature at its middle point, so that the profile of the whole fibula is triangular: Blinkenberg XIII 12 and 13. The purpose of this was to provide better attachment for a guard chain, which is preserved on examples from Carchemish, Woolley, *LAAA* VII, pl. xxiii. D. F.

91. Blinkenberg, XII 9.

92. Blinkenberg, XII 10*b*.

93. Blinkenberg, XII and XIII 3. At Gerar the spring is replaced by a pivot joint (Petrie, *Catalogue of Palestinian Antiquities*, London, 1927, 5; *Gerar*, 1928, pls. xvii–xviii) and similar makeshifts occur at Nineveh and in Cyprus, Blinkenberg Types XIII 3 and 6: in XII 15*a* from Dodona and XII 13; cf. 15*c* from the Heraeum, the pin turns on a rivet. Fibulae from Babylon, R. Koldewey, *Das wiederaufstehende Babylon* (Leipzig, 1913), fig. 189.

94. For a probable occasion of this spread to the northwest, see p. 448.

95. For example the rich series of "Asiatic" fibulae from the archaic Artemisium at Ephesus. Hogarth, *BM Exc. Eph.* (1908), I, pls. iv, x, xvii, xix, cf. *Ionia and the East* (Oxford, 1909), 56–57.

96. G. and A. Koerte, *Gordion* (*Jahrb. d. Inst.*, Erganzungsheft, V, Berlin, 1904).

97. Greek letters on some of the pieces are in the alphabet of Sicyon or of Corinth, Koerte, *Gordion*, 111.

98. Even the earliest of the tumuli with interments are subsequent to the complete differentiation of the "Asiatic" type of fibula, which occurs also (as we have seen) in Hissarlik VII; so there was time enough for an original practice of cremation to give place to coffin burial under stress of local considerations no longer ascertainable.

99. R. M. Dawkins, *BSA* xiii. 44 ff.: J. P. Droop, xiii. 112–14, fig. 3: D. Mackenzie, xiii. 436: a "violin-bow" fibula, 113, fig. 3*a*; "symmetrical" type, fig. 3*j*; "spectacle" and derivatives, figs. 17–21 found "with great frequency"; the "symmetrical" and "stilted" types are described as "subsequent," and the "catch-plate" types as "very rare." This is what was to be expected in Laconia even in a sanctuary: yet there were two Italian types.

100. Crete, Blinkenberg, I 13*a*; III 6*a*, *b*. Blinkenberg, I 13*b*.

101. Cephallenia: figured *Deltion* 1919, 95, fig. 11.

102. Blinkenberg, I 11 and 12.

103. Blinkenberg, XIV 2*g*: Droop, *BSA* xiii. 84, 112–13; xii. 321. Clearly the fashion and the demand had become divorced from the skill to supply these masterpieces: local craftsmen who had inherited the "violin-bow" fibula, disguised this with functionless wire work, and ivory models of it.

104. Blinkenberg, XV.

105. For this controversy, Childe, *Dawn*, ch. ix., and the references to ch. viii.

106. Childe, *Dawn*, 186.

107. Childe, *Dawn*, 193–94. The use of coils of gold wire for earrings probably spread first from Troy to the Danube, then from the Danube to Mycenae. In the masterly manipulation of spiral designs on metal work, honors are divided, but neither the Danubian nor the Ægean Bronze Age invented this kind of decoration. It occurs in the "royal tombs" at Ur.

Fimmen 120 gives references for amber: but it had only a short vogue. G. Karo, *AM* xl, 157–58.

108. That the specialized Minoan rapier was not unknown in the north is indicated by examples found at Grevena on the Haliacmon and at Karaglari be-

tween Sofia and Philippopolis; Casson, *Macedonia*, 135–73. It was widely used in the Mediterranean, in Sicily, Peet, *Stone and Bronze Ages*, figs. 218, 225, 240: in Palestine, Macalister, *Gezer*, iii. pl. LXXV 13. But it is not clear in what sense "they correspond to the central European 'leaf-shaped' swords which at the same period penetrated into the Mediterranean area from the north, and exemplify the balance of commerce between the two regions," Casson, *Macedonia*, 135. The sequence of types has been studied by H. J. E. Peake, *The Bronze Age and the Celtic World*, London, 1922, ch. vii–x.

109. Bronze leaf-shaped sword from Mycenae (in the ruins of the Mycenae palace): from Cyprus, in possession of Prof. P. Geddes, (unpublished), and a fragment, *BM Exc. Cyprus*, fig. 31 (963): from Egypt, Peet, *BSA* xviii. (1911–12): Borchardt, *Æg. Z.* L. 61, pl. V; *Pr. Z.* iv. 233 (Berlin Inv. 20305 inscribed; 7353). The swords of the Libyan invaders in 1221 were of the same long straight-edged type, which the Egyptians called *sf. t*; which may represent the Semitic word *saïf*, *sêf*, Dümichen, *Hist. Inschr.* i. 26–27. If the Greek *xiphos* is also connected, *sf. t* may originally have been a Libyan or Sea-raider word.

110. Swords of the Sea- and Land-raiders: Bossert, 343; of Shardana mercenaries of Rameses III, Bossert 345; actual examples in bronze from Gezer, H. R. Hall and M. Borchardt, *Proc. Soc. Antiquaries*, London xxvii. (1914–15), 127–30; from Phoenicia, C. L. Woolley, *Syria*, ii (1921), 180, fig. 4; represented on a Cypriote vase of the Early Iron Age, *BM Cat.* C 737. Swords brought as tribute to Thothmes III are of the Land-raider type and probably Syrian, like the still earlier sword inscribed with the Hyksos name Apepi, Wainwright, *LAAA*, vi (1914), 51, pls. IX 18, XI 69, XIII 100, XIV 1–3.

111. *BM Exc. Cyprus* (London, 1900), pl. II 872. There is the same diversity in other equipment. The Minoan rapier was properly used with the great leathern "body-shield" (p. 376) familiar from Minoan representations. But Sea-raiders and Egyptian mercenaries, like the Cypriote warrior, carry round "parrying-shields"; and the Cypriote, like the Sea-raiders, wears body armor of jointed zones, recalling the zones of Agamemnon's "breastplate," which was a present from Cyprus: *Iliad*, xi. 19–28. The grammar shows that the description of this "breastplate" was inserted as an afterthought; but how soon after the rest was composed?

111*a*. A sword "all of bronze" *Odyssey*, viii. 403–6; nevertheless it had silver "handle" and "studs."

112. *Iliad*, xiii. 576, xxiii. 808 with Schol. Ven. A. "alone among foreigners the Thracians use swords of the largest size."

113. The sword of Peleus, Apollodorus, iii. 133; Apoll. Rhod. i. 204: of Theseus, Plutarch, *Th.* 7.

114. It is of the type known in classical times as *machaira*, and there is no reason to doubt that the *machaira* which Agamemnon habitually wore with his sword was of the same kind, *Iliad*, iii. 271, xix. 252; it was worn also in peace time *Iliad*, xviii. 597, and for general use, xi. 844. Later it was used by the Thracians, Thucydides, ii. 96, 98, vii. 27; and Egyptians, in the fifth century, Herodotus, vii. 89; and in Greece in the fourth century, Xenophon, *Cyrus*, xii. 11. For Thracian examples, and for other Thracian weapons, see Casson, *Macedonia*, 166–67. Carians in Xerxes' army used "sickles," *drepana*, Hdt. vii. 93.

115. One-edged swords; Egyptian, Müller, *AuE* 361, 375–76; Hatti, Müller, 328; Hissarlik, Schmidt, *Schl.* 6464, 6454; Caucasus, de Morgan, *Préhistoire orientale*, iii., fig. 206 (2, 3) 221 (4). In the fifth century there was an Egyptian corps of "sabre-men," Herodotus, ix. 32, cf. vi. 89.

116. Dodona (C. Carapanos, *Dodone et ses ruines* (Paris, 1878), pl. LVII 1, 102, 135) Boeotia (Athens Nat. Mus. 9433); Attica, narrow (Dümmler, *AM.* xi. 297, fig. 132; xiii. 297), broad (J. Naue, *Vor-roemische Schwerter*, Munich, 1903, pl. VI 8; Argolis, *Tiryns*, i. 128–30); Crete, Droop, *BSA*, xii. 28, fig. 2 (narrow); Harriet A. Boyd, *AJA*, v. 145 (narrow), 137, fig. 4 (broad and very concave); Xanthoudides, *Eph.* 1904, 29, fig. 7 (broad, but in bronze). For Cyprus see note 109.

117. Iron in antiquity, W. Gowland, *Archaeologia*, lvi. 267 ff.; *JRAI* (1912), 235 ff.: H. R. Hall, *Oldest Civilization of Greece* (London), 200 ff.; *Man* (1903), No. 86: Sir W. M. F. Petrie, *Ancient Egypt* (1915), 19–23. Throughout this section I am indebted for much help to W. T. A. Rickard of Berkeley, California.

118. The Egyptian word *ba* occurs in Sixth Dynasty texts; but it is not certain whether it means "metal" generally, or "iron." Later texts have *ba-n-nub* "metal of gold," and in a laudatory text of Rameses II the king's arm is compared with *ba-n-pet* "metal of heaven," whence Demotic *benpi* and Coptic *benipe* "iron" are derived. Another late phrase is *ba-n-ta-bol* "foreign metal." There is an iron bead of pre-dynastic age, other objects of iron from IV, V, and VI Dynasty sites, a spear from Nubia of the Thirteenth, one other object earlier than Eighteenth, and a halbert of the reign of Rameses III (*ca.* 1200). Tut-ankh-amen (1350) had one iron saber evidently very precious; Howard Carter, *Tomb of Tut-ankh-amen* II. 268, pl. lxxxvii. *b.* About 1100 there are iron knives from the Ramesseum; one has a bronze handle cast on it. But no iron is mentioned in lists of tribute from Syria under the Eighteenth Dynasty, nor with the 9,000 bronze swords collected for Merenptah after the Libyan raid of 1221 (Petrie, 22).

119. Iron attracts, *Odyssey*, xvi. 291, xix. 3; its hardness, iv. 510, xix. 211; confusion with haematite, G. A. Wainwright, *The Labyrinth* (London, 1912), 19. The Harris Papyrus mentions statuettes of *ba-n-pet.*

120. "Gray" iron, *Iliad*, xvii. 434, *Odyssey*, ix. 393.

121. "Flaming" (flame-colored) iron, Odyssey, i. 184; axes, *Iliad*, iv. 485.

122. A "self-cast" ingot, *Iliad*, xxiii. 826–35, axes and half-axes, xxiii. 851–58.

123. Iron mace, *Iliad*, vii. 141–44; knife, xviii. 34; fetters, *Odyssey*, i. 204; gates, *Iliad*, viii. 15; chariot axle, v. 623.

124. Compare the remarkable "furnace" structure at Lachish, F. J. Bliss, *Mound of Many Cities* (1894), 47–50, fig. 94: though it was apparently not used for iron (J. H. Gladstone *in* Bliss, p. 190). See also Petrie, *Gerar*, 1928, Chapter VI.

125. In *Joshua*, vi. 19–24, iron is included in the loot from temple treasuries at Jericho; compare the loot from Bashan and Gilead, *Joshua*, xxii. 8, and the iron bed of King Og, *Deut.* iii. 11, *Judges*, iv. 13. H. R. Hall, *CAH* ii. 291–92 suggests that the Philistine prohibition of metal working among the conquered Israelites, I *Sam.* xiii. 19, had special reference to this iron industry.

126. Carchemish, *BM Exc. Carch.*, ii. (1921), pl. XXIII (reoccupation layer); C. L. Woolley, *LAAA* vii. pl. XXV, H. J. K. (tombs at Deve-Huyuk). In 800, a very large store of iron was captured by the Assyrians at Damascus Petrie, 22.

127. Gerar. Petrie, *Cat. Palest. Antiq.* (London, 1927), 5. *Gerar* (1928), pl. xviii.

128. Bronze swords from Cyprus, see note 109 above.

129. Iron swords from Cyprus: (*a*) *straight-edged:* Myres, *Cesn. Hdbk.* 4725; *CMC* 3821, 3911–12; A. P. di Cesnola, *Salaminia* (London, 1882), pl. V 2; others from Amathus, P-C, III p. 421: *BM Exc. Cyprus* (from Tomb 286, noted in my diary, but unpublished); from Tamassus and Curium, Ohnefalsch-Richter, *KBH* CXXXVII 7; *ZfE* (1899), 313–27, fig. xxi. 11–13: Berlin Antiquarium 8142 (589): (*b*) *leaf-shaped:* Myres, *Cesn. Hdbk.* 4726 (and a silver-riveted hilt) 4727; *CMC* 3913; *Salaminia*, pl. V 1 (with cross-hilt); Fitzwilliam Museum, Cambridge (unpublished). On an engraved silver bowl (Myres, *Cesn. Hdbk.* 4554; P-C, III, fig. 552) both types are represented, the broad blade held by an Assyrian figure, the straight-edged by Egyptians.

130. Iron in Asia Minor, H. T. Wade-Gery, *CAH* ii. 524. W. Belck, *ZfE* xlii. 15 ff. suggested that iron was introduced into Philistia by the Sea-raiders; but offered no proof that iron working was earlier in the Ægean than in Palestine. Had he suggested the Land-raiders, he would have been very nearly right.

131. Hatti supplies of iron: D. G. Hogarth, *CAH* ii. 267.

132. Assyrian iron: Petrie, *Ancient Egypt* (1915), 19–23.

133. Phoenician iron from Asia Minor (Tarshish = Tarsus): *Ezekiel*, xxvii. 12. Cf. 13 (Tubal and Meshech); Hogarth, *CAH* ii. 272 (Tibal).

134. Chalybes in Greek literature: Æschylus, *P. V.* 133, 715; Euripides, *Alcestis* 980; Apollonius Rhodius, ii. 1001. Alybe: *Iliad*, ii. 857. Strabo, 549. Giles, *CAH* ii. 5. In the fifth century steel came through Scythian hands, presumably from north of the Caucasus, Æschylus, *Septem*, 728, 816–18. Rostovtseff, *Iranians*, 18 quotes A. S. Hunt, *Oxyrhynchus Papyri*, X 1241, v. 3 ff. for the "invention of iron" by Saneunos, a king of Scythia; and gives examples (41. 225) of Scythian iron work.

135. Temese: *Odyssey*, i. 184: Strabo, 255–56. Mr. Oliver Davies tells me that for metallurgical reasons, iron-working in Cyprus may have begun rather late. Similarly while the Greeks were making iron already they were still importing steel from the Chalybes.

136. Dactyls, J. Overbeck, *Die antike Schriftquellen* (Leipzig, 1868), Nos. 27–39. Apollonius Rhodius, i. 1129 (Schol.) quoting the lost *Phoronis* epic, Kinkel, *Fr. Ep. Gr.* 211 fr. 2: Hesiod also wrote a poem about them: Diodorus, v. 64 says they crossed into Samothrace and Europe "with Mygdon," a Phrygian name: in Crete, Diod. v. 64: Pliny, *NH.* vii. 57 (197): in Cyprus, Clement, *Strom.* i. 362. Other Greek folk-memory: Daremberg-Saglio, *Dict. Antiq.* s. v. "Ferrum."

137. Telchines in Rhodes, Crete and Cyprus, Overbeck, Nos. 40–55.

138. A. H. Sayce, "Cuneiform Inscriptions of Lake Van," *J. R. Asiatic Soc.*, xiv. 378, xx, xxvi: Belck and Lehmann, *VGA Berlin* (1892–90): *ZfE* (1892–99): *Mitt. Geogr. Ges. Hamburg* (1890–1899): H. R. Hall, *Anc. Hist.* (1913), 458: C. F. Lehmann Haupt, *Armenien einst und jetzt* (Berlin, 1910), i.; W. Leonhard, *Hettiter und Amazonen*, 1911, 114. n.

139. This absence of connecting links is at present the main objection to the view of V. G. Childe, *Aryans* (London, 1926), p. 124, that the common source

for similar elements in the Caucasian and Danubian cultures is in Asia Minor. Asia Minor is still very imperfectly known, but what is known does not suggest any such northwestward trend of culture, but rather the reverse. This applies also to the occurrence of iron slag in the Bronze-Age layer of Vardarovtsa in Macedonia. O. Davies, *BSA* xxviii. 197–98.

140. Gowland, *Archaeologia*, lvi. 267 ff.; Myres, *Man* (1907), 94, p. 157; A. Lang, *CR* (1908), 47.

141. For example, Casson, *Macedonia*, p. 58: "The proximity of the Danubian regions to Thrace and Macedon resulted in the establishment in those provinces at an early date of an Iron-Age culture of great importance and wide extent. The ancestor of the *Noricus ensis* of Horace cut a way to the Ægean coast and established there settlements of a northern culture." Cf. 156 where Casson distinguishes between the people of the "Iron Sword," and the "Phrygian" invasion which he rightly assigns to the Late Bronze Age.

142. "Antenna" sword from Chauchitsa, Casson, fig. 50.

143. As the Trojans in the *Iliad* burned their dead, it is significant (if the Muski conquerors of the Hatti countries were of the same culture, as above suggested) that cremation was introduced together with iron, and fibulae, in the country round Carchemish, in the "reoccupation" period of the twelfth century, Woolley, *LAAA* vi. (1914), 96–98. But it is a further question whether the cremation custom of the "divine-born" dynasties in the *Iliad* is sufficient explanation of the sporadic cremations in the Early Iron Age of the Ægean, in view of the evidence from Leucas (p. 395).

144. Casson, *Macedonia*, 107, fig. 52.

145. Caria, *BM Cat.* 1101, 1103, 1124, fig. 208.

146. "Proto-geometrical" pottery on Ægean sites, B. Schweitzer, *Untersuchungen zur Chronologie der Geometrischen Stile in Griechenland* (Karlsruhe, 1917), i. 10–14.

147. Sicily, D. Randall-MacIver, *Iron Age* (Oxford, 1927), pl. XXXIII (6, 7, 15); Apulia, pl. XLII (4–6).

148. Philistia, Macalister, *Gezer*, i. 325 ff., ii. 326, fig. 158, iii., pls. LXXXIII–V.

149. Cyprus, Myres, *Cesn. Hdbk.*, 519, 608, 632, 647, 649, 654, 704–14; Schweitzer's list includes tombs at Agia Paraskevi which are of the Middle Bronze Age, Very rarely concentric circles do appear in that culture, but differently executed, and in no way related to those of the Early Iron Age.

150. Casson, *BSA* xxiii., pl. IV, 12–15, 17; *Macedonia*, fig. 55. L. Rey, *Les premiers habitants de la Macédoine* (Paris, 1921), 256–59, figs. 48, 50, 52.

151. Hissarlik, H. Schmidt, *Schliemann Coll.*, 3624–31; with tangent lines, 3710, 3921; not local clay, 3735–36: compare W. Dörpfeld, *Troja* (1893), fig. 74. Pannonian circles, M. Hoernes, *Urg. Kunst* (1925), p. 407 (4, 6).

152. Lycia, Ormerod, *BSA.* xvi., pl. VII, 4, 5, 15, 16. Cappadocia, Myres, *JRAI* xxxiii, 367 ff., pl. XL, 1, 5, 10. Gordium, Koerte, *Gordion*, figs. 18, 25. Carchemish, Frankfort, *Studies*, ii. 162, fig. 18.

153. Ægean "protogeometric" vases found in Cyprus, Myres, *Cesn. Hdbk.*, Nos. 1710–11 (concentric circles); 1703–5 (other designs); 1706–9 (native imitations). *BM Exc. Cyprus*, fig. 160(3) (other designs); and I have record of a fragmentary bowl with concentric circles from Amathus, 1894, tomb 198.

154. Other mainland elements in the Early Iron Age of Cyprus are the iron weapons (p. 129), "Asiatic" fibulae (p. 484), conical and pyramidal seal-stones, and the rectilinear panel decoration (p. 486).

155. Remarkable early instances are engraved designs on ivory and bone from Minoan tombs at Asine and Kakovatos with drilled circles replacing spirals, Persson, *Asine* (1924–25), 73–74, pl. XXVI, 4. K. Müller, *AM*, xxxiv (1909), 285 ff. Even earlier, on rude pottery in Crete. Evans, *PM*, I, fig. 21.

156. Concentric punches: in neolithic Sicily, P. Orsi, *BP It.* xvi. 65, pls. VI–VIII.

157. Influence of wood-turning on Cypriote pottery, Myres, *Cesn. Hdbk.*, Nos. 517–19, 622–43; "vertical circle" ornament, 647, 649, 704–14. Another example of concentric circles in woodwork, A. van Gennep, *Études d'Ethnographie Algérienne* (Paris, 1911), 59, figs. 21–22. In the Pitt-Rivers Museum, Oxford, is a wooden tankard from southeast Asia Minor, ornamented with concentric circles cut with a center-bit.

158. For this derivation of spiral and meander by dislocation (*Verschiebung*) of concentric patterns, G. Wilke, *Spiral-mäander-keramik und Gefässmalerei* (Wurtzburg, 1911), 1–22.

159. Bossert, 28–310. Similarly Hungarian bronze engravers sometimes replace spirals by circles, M. Hoernes, *Urg. Kunst* (Vienna, 1925), 401.

160. Bossert, 265. *BM Cat.* A 885 (circles), A 928–29, 959, 1094, 1096 (semicircles). Occasionally similar circles appear elsewhere, quite early, Frankfort, *Studies*, ii. pl. VII 2 (Cyprus), 4 (Syria).

161. Macedonian sites: Casson, *Macedonia*, 127–54: Heurtley, *LAAA*, xii. 15–26 (Vardino); *Antiquaries Journal*, vii (1927), 44–59; *BSA*, xxvii. 1–66 (Vardarovtsa) xxvi. 30 ff. (surface pottery); xxviii. 158 (Boubousta).

162. Bossed and grooved pottery (*Bückelkeramik*) from Hissarlik, Schmidt, *Schliemann Coll.* 3565–3587; Dörpfeld, *Troja-Ilion*, 200–3, figs. 215–16, pl. XLI; other concentric-circle designs as on Macedonian pottery, figs. 217–18.

163. The "Lausitz" culture: Seger, *Lausitzer-kultur* (in M. Ebert, *Real-lexicon der Vorgeschichte*, Berlin, in progress); Hoernes, *Urg. Kunst*,[3] 412–16 (Lausitz), 790–92, 828 (Buzau); Childe, *Man* (1923), No. 2, *Antiquity*, ii. 37–42, fig. 1. The same culture spread widely also in other directions; the characteristic bossed and grooved pottery (*Bückelkeramik*) appears, for example, beyond the Adriatic, in the Calabrian site at Torre Galli: D. Randall MacIver, *Iron Age*, pl. XL (b. 11, 13), fig. 69 (associated with a degenerate "spectacle" fibula, fig. 74): also in Lombardy at Bismantova (Randall MacIver, *Villanovans and Etruscans* [Oxford, 1924], pl. XIX, 16, 18, 25, 27).

164. Marmariani, W. A. Huertley, *Ant. Jour.*, vii. 215, fig. 25.; pl. xiii. fig. 21.

165. Concentric circles on Macedonian pottery, Casson, *Ant. Jour.*, vi. (1926), pl. IX, fig. 1: Heurtley, *Ant. Jour.*, vii. (1927), fig. 16.

166. Concentric circles in gold work, Casson, *Macedonia*, fig. 53.

167. Hoernes, *Urg. Kunst*,[3] 407.

168. Randall MacIver, *Iron Age*, figs. 7, 21, pl. XVIII (Como); compare note 163 above: O. Montelius, *Civilisation primitive en Italie*, pl. B. 38, 39, 41, 67, 81, 92; *Vorgeschichtliche Chronologie* (Stockholm, 1912), i. 69, figs. 159–60.

169. The socketed celt, a "Lausitz" invention: Childe, *Antiquity*, ii (1928), 42, fig. 2.

170. A Serbian flask with concentric circles resulting from lathe-work. Pitt-Rivers Museum, Oxford.

171. Geographical distribution of concentric-circle ornament, and associated objects, B. Schweitzer, *Untersuchungen* (Karlsruhe, 1917), i. pls. I–IV.

172. "Pot-hook spiral," Frankfort, *Studies*, ii. 171–73.

173. "Tangent-circles" or "pothook spirals," Hoernes, *Urg. Kunst* (1925), 341–43. Myres, *Cesn. Coll.*, 643, 644 (Cyprus): Ormerod, *BSA* xvi. 101 (Lycia, Phrygia): Frankfort, *Studies*, ii. pl. X 2, 5, p. 164, fig. 19.

174. "Pot-hook spiral" in Asia Minor: H. de Genouillac, *Céramique Cappadocienne* (Paris, 1926), I, pl. 2 (9809, 9811), 31 (126); and reduced to a rectangular hook, pl. 23 (11).

175. "Pot-hook spiral" in Macedonia; Casson, *Macedonia*, fig. 34; *BM Cat.* A 100 (1, 3, 5): Macedonia and Cappadocia compared: Heurtley, *BSA* xxviii. 189, fig. 33.

176. Pannonian "pothook spirals," Hoernes, *Urg. Kunst* (1925), 405, 407, compare 411, 481, 485 (Gemeinlebarn, in geometrical designs); 483 (Langenlebarn); 489 (Silesia); 341 (8) Hungary: C. Schuchhardt, *Alt Europa* (1919), 276.

177. Thucydides, i. 7, 11, 12.

178. Early Dorian movements, Herodotus, i. 56.

179. Lianokladhi, Wace and Thompson, *Pr. Th.* 180 ff., figs. 125–32 ("painted ware"), figs. 134–35 ("Minyan," i.e., "gray ware"); pp. 216, 246 (commentary), *BM Cat.* A 257 (fig. 48); Frankfort, *Studies*, ii. 112, n. 3, 113, n. 2, 172.

180. Boubousta was excavated by Mr. W. A. Heurtley for the British School of Archaeology at Athens; provisional report (*Times*, 19, 7, 1927), details, *BSA*, xxviii. 158–194, supplemented by letters from Mr. Huertley himself, Miss H. L. Lorimer of Somerville College, Oxford, and Mr. Oliver Davies of Exeter College.

181. Frankfort, *Studies*, ii. 172 n. (before the new evidence was available) preferred the earlier date.

182. In particular the enhancement of a vertical band by a spiral occurs on a painted fragment from the "eighth city" at Hissarlik, Schmidt, *Schliemann Coll.* 3651, and seems to be derived from the conventional "octopus" pattern characteristic of the "Philistine" pottery in Palestine, and contemporary vases from Calymnos, *BM Cat.* A 1008, 1011, 1020; another variant, from Crete, is *BM Cat.* A 744.

Notes to Chapter VIII

1. Principal contributions to the study of the "geometrical style" in Greece are as follows: F. Conze, *Sitzb. Ak. Wiss. Wien* (1870), comparison with primitive art of Central Europe: G. Hirschfeld, *Annali d'Inst.* (1872), comparison with Villanovan art: J. Kroker, *Jahrb. d. Inst.*, i. 95–125, comparison with Egyptian figure drawing: F. Dümmler, *AM* xi. 209 ff., xiii. 280 ff., geometrical style of Cyprus: J. Boehlau, *Jahrb. d. Inst.*, iii. 225–364, vases from Boeotia: D. Philios, *Eph.* (1889), 171–187, vases from Eleusis: A. Brückner and E. Pernice, *AM* xviii. 73–191, more vases from the Dipylon: J. Böhlau, *Festschr. anthrop. Ges.*, xxvi (Cassel, 1895), 89–110, fresh comparison with Villanovan art: S. Wide, *AM* xxi. 385 ff., pre-Mycenaean geometrical ornament; *AM* xxii. 233 ff., survival of Mycenaean ornament into geometrical; *Jahrb. d. Inst.* xiv. 26 ff., distinct insular and other local schools: J. L. Myres, *JRAI* xxxiii (1903), 367–400, geometrical style in Asia Minor: H. Dragendorff, *Thera*, ii (Berlin, 1903), insular schools and mainland influences: M. Vollgraff, *BCH* xxviii (1904), 364–99, local style at Argos, survival of pre-Mycenaean geometrical "peasant" art: F. Poulsen, *Die Dipylongräber und die Dipylon Vasen* (Leipzig, 1905), distinct earlier and later stages: E. Pottier, *Le problème de l'art dorien* (Paris, 1908), northern origin: J. P. Droop, *BSA* xiii. 118 ff. Sparta: A. J. B. Wace and M. S. Thompson, *Prehistoric Thessaly* (Cambridge, 1912), Lianokladhi and other Thessalian styles: K. Müller, *Tiryns*, i (Berlin, 1912), local style and succession of periods: K. F. Kinch, *Vroulia* (Berlin, 1914), fresh material from Rhodes: J. L. Myres, *Handbook to the Cesnola Collection of Antiquities from Cyprus* (New York, 1915), geometrical style of Cyprus: B. Schweitzer, *Zur Chronologie der Geometrischen Stile in Griechenland*, i (Diss. Heidelberg, 1917), ii (*AM* xliii. 1918, 1–152), Ægean and especially Attic origin: S. Casson, *Antiquaries Journal*, i (1901), 199 ff., archaeological evidence for Dorian invasion: C. Dugas, *La Céramique des Cyclades* (Paris, 1925), insular and Argive styles: A. W. Persson, *Asine 1924–25* (Lund, 1926), local style. Boubousta, W. A. Heurtley, *A Prehistoric Site in Western Macedonia and the Dorian Invasion* (*BSA*, xxviii. 158–194).

2. The "hierarchy of styles" is a phrase happily coined by M. Edmond Pottier, to whom the study of ancient ceramic art owes so much: *Catalogue des Vases antiques du Louvre* (1896), i. 250–51; quoting A. S. Murray, *Rév. Arch.* (1882), ii. 343.

3. Such "Bandkeramik," in which the decorated surface is treated as if of infinite extent along an equator, is earliest and best represented in the neolithic "First-Danubian" pottery (Childe, *Dawn*, fig. 78; Hoernes, *Urg. Kunst*,[3] 295); but all zone-decoration round cylindrical objects—wood, bone, bamboo—has the same essential quality.

4. "Free-field" decoration of Middle Minoan pottery—Bossert, 150, 152–53, 156, 158, and with naturalistic context 146, 159, 162–63, 260, 347. In Bossert 165,

the painted surface is regarded as crystal clear, and the vase is just full of octopus; and the same impression is conveyed less vividly in 162–63, 166, 258–59, 348–49.

5. Free field in Minoan relief work—Bossert, 87–97, 242–47, 287–93; gem design, 315–26; fresco painting, 64–68, 70, 212–20; spiral design, 167, 206, 240, 294, 312; foliated, 164, 165, 169.

6. Thessalian decorative art, of all styles—Wace and Thompson, *Pr. Th.* (throughout, but especially the frontispiece).

7. Thessalian camouflage: Tsountas, *Dimini and Sesklo*, pls. VIII–IX; Wace and Thompson, *Pr. Th.*, pl. I; Fimmen, fig. 118. Modern camouflage, *Encyclopaedia Britannica* (new volumes), xxx (1922), 540, pls. II–III.

8. Compare Pottier, *Louvre Cat.* (1896), i. 215 (of the geometric style which inherited this unpleasing trait) "elle ne veut pas charmer, elle frappe l'attention." For example, Schweitzer, ii. pl. I.

9. General prosperity in Mycenaean times: D. G. Hogarth, *The Twilight of History* (Newcastle, 1926).

9*a*. There was even a good deal of hand-made pottery in use, at Pylos, the Heraeum, Sesklo; sometimes with a "smear" finish, but also with incised ornament (Mycenae, Menidi, Cephallenia), as though paint had run short, Schweitzer, ii. 52–55, Pfuhl, No. 25 (Argive). Even when the crisis was past, "dark" fabrics were long in vogue; some of them so dark that the scanty decoration looks as if it were in light-on-dark, Schweitzer, ii. 79–80, Pfuhl, No. 9. Some even speak of "bands reserved in white," as if this technique anticipated that of Attic "red-figured" vases.

10. A striking example of the coexistence of "men's work" and "women's work" in the same industry has been studied in Algeria by A. van Gennep, *Études d'Ethnographie Algérienne* (Paris, 1911), 22 ff., especially 32. In Greek, *kerameus* seems to be always masculine and there is no word for a "she-potter." See also Chapter V, n. 63, above.

11. Cypriote chariot scenes and the like, *BM Exc. Cyprus* and *BM Cat.* I ii. (passim): the "Warrior-vase" from Mycenae, Bossert 265–66, and a bull frieze, 264; M. S. Thompson, *LAAA* v. (1913), 1–3.

12. Rhodian local style, A. Maiuri, *Rodi* (Rome, 1923), 78, 158, pls. XXI-XXII: similar vases from eastern Crete, Bossert 172, and from Argos, 261.

13. Octopus design, as panel frame—Bossert 270: *BM Cat.* A 873, 906, 981, 1008, 1011, 1020, 1029, 1067 (2).

14. "Corkscrew" design—Bossert 269, 271–2: *BM Cat.* A 868, 875, 881, 974.

15. In these ornaments only does the designer paint with full brush and replace shading with opaque silhouette. Bronze birds and horses, Casson, *Ant. Jour.*, i. 203.

16. The common "Maltese cross" ornament originates (as occasional misfits show) from filling the "bull's-eye" of a concentric circle with four triangles joined at the summit.

17. Amyclae: Strabo, 364–65: Pausanias, iii. 2. 5–6: vases, E. Pfuhl, *Malerei und Zeichnung der Griechen* (Munich, 1923), iii. No. 20.

18. The dependence of much geometric ornament on suggestions from basketry was noted long ago by Pottier, *Louvre Cat.* i (1896), 219.

19. Geometrical schools of design west of the Adriatic: *BM Cat.* H 248–65: D. Randall-MacIver, *The Iron Age in Italy* (Oxford, 1927), chapters v (Sicily), vii (Calabria), viii (Apulia). Probably these painted styles go back to an incursion from east of the Adriatic, such as brought painted ware of Thessalian affinities to Leucas, W. Dörpfeld, *Alt-Ithaka*, ii., pl. LXXXVIII*a*.

20. Attic geometrical vases imported into Cyprus, Myres, *Cesn. Hdbk.* Nos. 1701–2, local imitations, 1706–9: fabrics akin to that of Halos, 1710–11: native style, Nos. 400 ff. (sub-Mycenaean), 501 ff. (geometrical): *BM Cat.* C 738–66, 814–15, etc. *Louvre Cat.* A 103, 111, 120, 151: Pfuhl, Nos. 45–46: P-C iii. figs. 479, 496–7, 507–8, 523, pls. III, IV.

21. Cappadocian pottery: H. de Genouillac, *Céramique cappadocienne* (Paris, 1926): Frankfort, *Studies*, ii. 154–64, pls. IX–XII, figs. 17, 19: Myres, *JRAI* xxxiii. (1903), 367 ff. (based, as its date shows, on very few examples). The "black-on-white" fabric enhances deliberately the contrast between pattern and ground by a dense white priming or slip: the "tricolor" technique employs red paint to fill up black outlines, and detach the pattern more completely from the ground.

22. The "black-on-white" technique is represented in Cyprus by the "white-slip ware," Myres, *Cesn. Hdbk.* Nos. 281–317; E. Gjerstad, *Studies on Prehistoric Cyprus*, Uppsala (1926), 194–200: the "tricolor" by a rare and probably foreign fabric quite at the end of the Minoan series, *BM Cat.* C 732, 737 (=Gjerstad, p. 205 figs. 5–6, cf. 207); Myres, *Cesn. Hdbk.* No. 393. The use of red paint as an accessory to "black-on-white" in Ægean fabrics begins at Melos quite early in the Bronze Age; merges in the Middle Minoan polychrome style; then fades out, except as a Late Minoan rarity and in the foreign fabric from Cyprus above mentioned. But in the Early Iron Age, though not quite at its beginning, broad red bands, sometimes edged with black as in the Bronze-Age fabrics, replace the broader black bands of the rhythmic zones, and red fillings invade the lozenge designs in panels, Myres, *JRAI* xxxiii (1903), 390 ff.; *Cesn. Hdbk.* p. 66, Nos. 519, 543, 554 ff., 559–60, 579 ff., 608 ff., 665 ff., 676, 751 ff.; the climax comes in figure-painted vases of the eighth or seventh century, Myres in *Essays in Ægean Archaeology* (Oxford, 1927), 77–78, pls. XIII–IV. On the whole question see Frankfort, *Studies*, ii. 83, 157–58. More especially is the "tricolor" tradition dominant in the painted architectural terra cottas of Sardis: T. L. Shear, *Sardis*, x (Cambridge, Mass., 1926), especially pl. XIV; and through the art of Lydia it infests in turn the painted pot fabrics of Ionia.

23. Myres, *JRAI* xxxiii (1903), 367 ff. Frankfort, *Studies*, ii. 170 ff. One "hemispherical bowl" of characteristic Cypriote Bronze-Age fabric is reported from Bulgar Maden in Taurus: de Genouillac, 130.

24. Diagonal dissection of panel designs, Myres, *Cesn. Hdbk.* 501, 532, 541, 596, 608, 613, etc.

25. Rhodes: Ialysus, *BM Cat.* A 801–970: *Louvre Cat.* i. A 290 (Lindus); A 288 (Camirus): Pfuhl, No. 47 (Lindus); 48–49 (Camirus): Excavations of 1914, *Annuario* of the Italian School at Athens, ii (1916), 271: Maiuri, *Rodi* (1923), 78–158, pls. XXI–XXII.

26. C. Dugas, *La Céramique des Cyclades* (Paris, 1925), 140–55.

27. Cnossus: geometrical pottery excavated in 1927: preliminary notes, *BSA* 1899, 83, fig. 5; Evans, *Times*, 15. 7. 1907: to be published shortly by Mr. H. G. Payne. For the significance of predominant red color see note 22 above.

28. Arcadia in Crete, D. Levi, *LAAA* xii (1925), 1 ff.; *L'illustrazione italiana*, 14 Sept. 1924, 319–322.

29. Praesus, Droop, *BSA* xii. 24 ff.; Adromyloi, 43 ff.: Erganos and Kourtes, Halbherr, *AJA* v (1901), 302 ff.: Anopolis and other sites, Wide, *Jahrb. d. Inst.* (1899), xiv. 26 ff.: Pfuhl, Nos. 34–39.

30. Thera: H. Dragendorff in *Thera* ii (Berlin, 1903), especially chap. iv: *Louvre Cat.* A 266: de Ridder, *Cat. Bibl. Nat.* (1902), pl. I 21–22: Wide, *Jahrb. d. Inst.* xiv (1899), 31–32, figs. 6–9: Pfuhl, Nos. 32–33. Melos: Conze, *Melische Thongefässe:* Hopkinson and Penoyre, *JHS* xxii. 46 ff. Euboea: Couve, *BCH* xxii. 279 ff., fig. 2 ff. Other insular schools, *Louvre Cat.* A 490–91, and Dugas.

31. Attica: *Louvre Cat.* i. pl. XX; Pfuhl, Nos. 9, 10–15. Boeotia: *Louvre Cat.* i. pl. XXI; Pfuhl, Nos. 16, 18, 19. Eretria: Couve, *BCH* xxii (1898), 279; Dugas, *Céramique*, 138, 227–28; a quite early geometrical vase from Euboea, Pfuhl, No. 19. A. Jardé, *La formation du peuple grec* (Paris, 1923), notes that as the Boeotian style owes more to the Islands than to Attica, the spread of geometrical art is here in the opposite direction to what the "Dorian" theory requires; cf. *BCH* xxxv (1911), 390.

32. Adjustment of center panel: Dugas, *Céramique*, pl. VI 2 (Thera): Schweitzer, i. 72, fig. 12 (Thera); 102–4, figs. 22–23, 25–27. And this survives in the composition of such masterpieces as Myres, *Cesn. Hdbk.* 1701: Rostovtseff, *History*, pl. LVII 2 (New York); *CAH* pls. I 348(*a*) (Athens).

33. Early panel-style in Palestine, Macalister, *Gezer*, III, pl. lxxxv. 17; L. H. Vincent, *Jerusalem sous terre*, 31, pl. ix-xi. *Syria*, v. 81, 186, 294. E. Saussey, *Syria*, v. 169–85.

34. Dugas, *Céramique*, 264–65, thinks that Cycladic potters were vagrant, like the Italian potters who settled in France in the sixteenth century. Other parallels are the tinkers in England, blacksmiths in Serbia, and silversmiths in India; and indeed traveling potters are still to be met in Crete. S. Xanthoudides in *Essays in Ægean Archaeology*, 1927, 118–28.

35. Dugas, pp. 107–9. The suggestion of M. W. Vollgraff, *BCH* xxviii (1904), 364–99, arising out of his excavations at the Deiras ridge at Argos (where the "geometric" village overlies the Mycenaean cemetery), that the geometrical style is a recrudescence of a "peasant art" (*Bauern-stil*) which had existed before the Minoan naturalism and had never been quite extinguished by it, has been widely accepted; but many of the current illustrations of it may well be due to skeuomorphic "convergence," not to transmission. Compare Vollgraff's own observation after excavations on the Aspis hill, *BCH* xxx (1906), 5–45; the pre-Mycenaean "geometrical" style is quite different from that of the Deiras ridge.

36. Migration of craftsmen, Dugas, 264; cf. note 34 above.

37. P-C ix, pl. XIX, fig. 212: *Louvre Cat.* A 314–17.

38. Cranes and quails on Samian amphorae: Böhlau, figs. 24, 25: *Louvre Cat.* A 328 (P-C ix. fig. 220). Cock, *Louvre Cat.* E 646. Lion, E 592. Orientalizing vases, Pfuhl, No. 54 (from Thera), 55–56 (from Crete). Designs in medallion fields, *Louvre Cat.* A 304, 305: P-C ix. 213, 214.

39. Pottery from Argolis: Waldstein and others, *The Argive Heraeum:* K. Müller, *Tiryns* i: Persson, *Asine* (1924–25). Corinthian and Argive geometrical vases, Pfuhl, iii. Nos. 26–31 (Corinth), 21–25 (Argive).

40. Proto-Corinthian polychrome, *Louvre Cat.* i. pl. XV. Pfuhl, Nos. 58–59: "orientalizing" styles, 60–71: *Louvre Cat.* i. pls. XLI–XLV.

41. There has been occasional use of red paint on Ægean pottery even before the rise of the Middle Minoan polychrome school: Bosanquet *Phylakopi*, 118 pls. XX–XXII: other instances in Dugas, *Céramique*, 69 ff. where its relation with "half-tone" is discussed (73) but without noting the new source of "trichrome" or "tricolor" art in Asia Minor.

42. Myres, *JRAI* xxxiii (1903), 165 ff.: foreign vases with red paint in Mycenaean tombs in Cyprus, *BM Cat.* C 732 ff.; native copies, C 736–37; red in Cypriote geometrical style, C 738 ff.

43. Polychrome terra cotta at Sardis, T. L. Shear, *Sardis*, x. figs. 15, 27, pls. VIII–IX. The dependence on supplementary red color is especially clear at Ephesus, Hogarth, *BM Exc. Eph.* (1908), pl. XLIX: Idrias, Winter, *AM* xii. 226, pl. VI.

44. Shields from the Idaean Cave: F. Halbherr and P. Orsi, *Museo italiano di antichita classica*, ii (1888), 689 ff. Atlas, pls. I–XIII.

45. This aspect is noted, though from a rather different point of view, by Pottier, *Louvre Cat.* i 249: "le dessein géométrique spontané et subjectif, est sterile, le dessein naturaliste, réfléchi et objectif, est fécond." But is it not naturalistic art which is "spontaneous," and the geometric that is "reflective"? "Barren," or rather "virgin," it may have been, in adolescence; but how fruitfully receptive later!

46. Geometric ornament on a metal strip, P-C vii. 115.

47. Attica, Schweitzer, ii. pl. I.

48. Laconia, Droop, *BSA* xiii. 119, fig. 1*e* (Orthia) "sixty per cent show only parallel straight lines, vertical or horizontal," with a "habit of alternating between a thick and a thin line." Wide, *Jahrb. d. Inst.* (1899), 84, figs. 41–42 (Amyclae).

49. Samos, J. Böhlau, *Aus ionischen und aeolischen Nekropolen* (Leipzig, 1898), pls. VI, VIII, 1, 2, 3, 6. Compare Late Minoan examples, *BM Cat.* A 1051.

50. Athens, Acropolis graves, Schweitzer, ii. 58.

51. Samian "dotted-circle" ornament, Böhlau, pl. II 3, 4; VI 4; "wavy line" VI 4, VIII 14.

52. Schweitzer, ii, figs. 11, 19, 24 (body); fig. 17 (Tiryns). Pfuhl, No. 9.

53. "Dog-tooth" ornament, Schweitzer, ii. pl. I 2, 3, 4, 5: "battlement," figs. 4, 6, 21: for a counterchanged "wavy-line" ornament, Shear, *Sardis*, x (1926), fig. 22. There is indeed some use of counterchange in Lydian decorative art, but so late that it is doubtful whether it is here native or a loan from Greek sources. The rectangle, diagonally divided and counterchanged (*Sardis*, pl. XIV) occurs in Cappadocia and in Cyprus, as well as in Late Minoan (*BM Cat.* A 1075 [10]) and in Greek geometric work. There is a Mycenaean instance even of "wave ornament," *BM Cat.* A 930: a "dog tooth" from Cyprus, Myres, *Cesn. Hdbk.* 413.

54. Greek fret: Schweitzer, ii. pl. I 2, 3, 4, 5, ii. 1, 3; (elaborate) figs. 18, 24; (chequer) iii; (swastika) fig. 15: Pfuhl, Nos. 9, 16: P-C vii. 114 (elaborate key-fret

diaper); 37 (the original outlines reappear as a pattern): contrast the prototype "L-shaped" pothook on terra-cotta placque from Sardis; Shear, *Sardis*, x (1926), pl. V, and on pots in Cappadocia, Genouillac, *Cér. Capp.*, pl. XXIII (11): there is even a maeander panel in this series, pl. XXV (138). Similarly the swastika is generated from "L-shaped" pothooks within a square panel (Schweitzer, ii. 95), though it sometimes arises also in basketry or textile ornament. Dugas, *Céramique*, 127 thinks that the guilloche arose locally out of a "running-S" ornament which goes back to a Mycenaean spiral, though he does not exclude the influence of the oriental "cable pattern" (p. 236), which is common on "Hittite" cylinders from Asia Minor (A. Furtwängler, *Antike Gemmen*, i. pls. I 4: W. H. Ward, *Seal Cylinders of Western Asia*, 271 ff.) and became popular in Ionian decoration.

55. Panel ornament on false-necked vases, *BM Cat.* A 916, 1010, 1057. Various Mycenaean vases from Cyprus, C 487, 514, 528, 560.

56. Other ornaments used to separate panels: *BM Cat.* A 873, 906 (octopus); A 875, 881, 974 (sea shell); A 906, 911 (flower); A 711, 1014 (indeterminate).

57. Octopus as frame: *BM Cat.* A 1015: P-C vi. p. 931: compare A 931–32 which have escaped the notice of symbol-hunters, though the octopus is yet recognizable.

58. Experiments in panel decoration, *BM Cat.* A 928, 1085, C 423, 514, 562.

59. Tree trunks as frame: *BM Cat.* A 1022; F. J. Forsdyke, *Essays in Ægean Archaeology* (Oxford, 1927), 27–30, pls. I, II. Even in Minoan art a complex theme had to be treated so; for example the mysterious "Ring of Nestor," Evans, *JHS* xlv (1925), figs. 44, 55, pl. IV; but the same device occurs on the "Sarobina disc" Bossert 350.

60. Heraldic symmetry in Minoan art, Bossert 195 (Lion gate); 308, 311 (birds and animals); 317, 320–22 (gems).

61. Mere partitions, *BM Cat.* A 932, 956, 965, 1008, 1020, 1022.

62. Schweitzer, ii. 126 ff. has suggestive comment on the contrast in this respect between Greek and Roman architecture. But in Rome, public business stopped if authority "saw lightning"; and Senate and Praetor alike sat indoors.

63. Late Samian vase-painting, Böhlau, *Aus ionischen und aeolischen Nekropolen* (Leipzig, 1898), figs. 22–29.

64. Other Ionian schools, *Louvre Cat.* A 288, 290, 304–5, 314–17, 321, 328.

65. Insular "filling ornaments," Dugas, *Céramique*, pl. IV 1, VI 1 (maeander cut short); IV 1 (dissected); VII 1–2, VIII 2, IX, X (reduced to "filling ornament").

66. Panel schemes in Cyprus, Myres, *Cesn. Hdbk.* 458, 501, 543, 596, 608, 613, 696, 697, 699: Schweitzer, ii. figs. 8, 9.

67. Geometrical vase from Caria, Winter, *AM* xii. pl. VI (=Ohnefalsch-Richter, *KBH*, CXCV, 226 ff., pl. VI: P-C iv. 328, figs. 231–3).

68. Woodwork, influence of carpentry design, the parts in relation to the whole, Schweitzer, ii. 113; he compares the growth of Pompeian wall decoration (styles I–III). The same source of inspiration has long been recognized in Greek temple architecture.

69. The evidence for a cooler and moister climate in classical Greece is collected and discussed in C. E. P. Brooks, *Climate through the Ages* (London, 1926), Chapter XVIII. See Chapter VI, n. 44–45 and Myres, *Proc. BA* (Dundee), 1912, 534–5.

70. In the northwest, where rainfall is still adequate, and exploitation lags, wood still plays much the same part in peasant life as in the forest zone of central Europe. Arcadian shepherds commonly carried turned wooden flasks within my memory. In 1897 I saw a cargo of turned wooden milk bowls unloaded from an Albanian sailing vessel at the African Tripoli, and was offered *kuskus*, like Sisera, from a "lordly dish" of the same make at a half-nomad tent in Tarhuna.

71. Herodotus, i. 147.

72. Herodotus, i. 146.

73. Primitive geometrical in Ionia: an amphora with concentric circles and semicircles, Pfuhl, No. 50.

74. General absence of plant ornament, A. Riegl, *Stil-fragen* (Berlin, 1800), 150 ff.; an example, however, from Rhodes, *Louvre Cat.* i. A 288 (=P-C, ix. [1911], 207, fig. 418).

75. Horses and ducks from the Orthia site, Droop, *BSA* xiii. 111, fig. 2.

76. Casson, *Antiquaries Journal*, i. 202.

77. Dugas, *Céramique*, 129, fig. 89*b*. The Cyclades, like Homeric Ithaca, had not much use for horses, the representations of which on Cycladic vases are therefore essentially conventional and borrowed, Dugas, 202.

77*a*. Horses on Boeotian vases, Pfuhl, No. 16; on Attic vase lid, Pfuhl, No. 8.

78. Myres, *Cesn. Hdbk.* 2078–81.

79. Duck vase from Cappadocia, Genouillac, *Cér. Capp.*, pl. XI (12–164): but why is this—and also the goat vase (11–165)—described as "Pontic Ionian" work? Ionian ceramic may have been influenced by this inland style, but not conversely.

80. Homeric circus-riding, *Iliad*, xv. 679; *Odyssey*, v. 371: in *Iliad*, x. 507–14 Athena decided Diomedes *to go back for the car* instead of killing more Thracians.

81. Ridden horses at Carchemish: Woolley, *LAAA* vi (1914), pl. XXVI 2–4, 95: in Palestine, terra cotta, at Bethshemesh, Mackenzie, *PEF Annual* (1912–13), pl. LV, but it is later than the disappearance of the painted "Philistine" pottery: on a Cappadocian vase, Genouillac, *Cér. Capp.* No. 129: in Cyprus, *BM Cat. T-C* A 165–72, 217–20, 236, pl. IV: Myres, *Cesn. Hdbk.* 2086–97 on vases, 768–69: in Asia Minor, Myres, *JRAI* xxxiii. 399, pl. XXXIX 1, 2, and unpublished series from Alizetin near Halicarnassus: at Lindus, Kinch, *Vroulia*, frontispiece (terra cotta): on Dipylon vases, P-C vii. 227, figs. 99–100, Pfuhl, Nos. 14–15: contemporary terra cotta riders, *BM Cat. T-C.* B 26, 63–64: on Corinthian vase from Boeotia, Athens Nat. Mus., 341, inscribed *hippostrophos* "horse-steerer" as if the subject were unusual. Cf. ch. iii. n 38–40.

82. B. Meissner, *Babylonien und Assyrien* (Heidelberg, 1920), 93.

83. F. Poulsen, *Der Orient* (Leipzig, 1912), 23, fig. 13 (Ashmolean Museum); later examples, figs. 14–19.

84. Horses in Danubian culture, Hoernes, *Urg. Kunst*,[3] 485 (Gemeinlebarn), 507 (Steiermark), 559 (Oedenburg), cf. Childe, *Dawn*, 171: in North Italy, 517 (Este).

85. Childe, *Antiquity*, ii (1928), 38.

86. Centaurs: *Odyssey*, xxi. 295: *Pheres*, Iliad i. 268, ii. 743: S. Colvin, *JHS* i. 107–167: Ridgeway, *EAG* 173–78: the first literary allusion to them as horse-

bodied is Pindar, *Pyth.* ii. 41 ff., but the vases carry the myth back to mid-geometric (tenth century). Callistratus, *Stat.* 12, distinguished between this and "the Homeric figure" of them, but did not convince Colvin (p. 128).

87. These oriental birds are discussed by Père Vincent, *Syria*, v (1924), 186–202: E. Saussey, *Syria*, v. 169–185, pl. XLIII thinks the "Philistine" birds are essentially of the old continental style. Birds on vases from Asia Minor: Myres, *JRAI* xxxiii. 384–85, figs. 7–10: early terra-cotta ducks from Cyprus, *BM Cat. T-C.* A 189–96, 225: birds on geometrical vases, Attica, Pfuhl, No. 7 (confronted), 14 (zone).

88. The lion: Hoernes, *Urg. Kunst*,[3] 534–35 notes that geometric and later Hellenic lions are alike symbolic, like the sphinx and griffin; and doubts whether any of these were drawn from eye-witness. Boeotian lions, Pfuhl, No. 18; Attic, No. 20.

89. The attempt has been made by W. Schafnitzl, *Der Schilderungsstil in den homerischen Gleichnissen* (Diss. Strassburg, 1917), to distinguish among the similes between a naturalist descriptive group, related in spirit to Mycenaean art, and a narrative humanist group, and to connect the latter with geometric art-style and its love of genre scenes. But the same difficulty recurs, as to the classification of scenes which describe animals, wild indeed themselves, but in some human relation, such as game for the hunter, or a danger to the traveler, like snakes or angry bees. Even the nodding poppy in *Iliad*, viii. 306, grows "in a garden."

90. Odysseus' compliment to Nausicaa, *Odyssey*, vi. 162–66: Alcinous' orchard and kitchen garden, vii. 114–32: compare that of Laertes, xxiv. 244–47, and Odysseus' recognition of his "very own" trees in it, xxiv. 336–44, and the cultivated olive trees *Iliad*, xvii. 54, xviii. 50–7.

91. Agamemnon's breastplate; *Iliad*, xi. 19–31.

92. Idaean shields; Halbherr and Ossi, *Museo italiano di antichita classica*, ii (1888), 689 ff., Atlas pls. I–XIII: Poulsen, *Der Orient*, ch. vi.

93. Herodotus, ii. 53. For the engraved bowls, Poulsen, ch. iii.

94. The belt of Heracles, *Odyssey*, xi. 609–14.

95. Bowls from Nineveh, Poulsen, *Der Orient*, ch. ii.

96. T. W. Allen, *Homer, the Origins*, Oxford, 1924, 86–88, the standard text (Pausanias, ix. 31. 4), 92–97, astronomical date about 850.

97. Three-stroke rhythm. Schweitzer, ii. 81–83.

98. Hesiod disqualified, Pausanias x. 7. 3: he "sang with a laurel wand in his hand," ix. 30. 3. On Boeotian epic, T. W. Allen, *Homer: the Origins* (Oxford, 1924), 88–92. How persistent were these local preferences is shown by Plato, *Laws*, 680*c*; in the fourth century "the Cretans have not much use for foreign compositions." On the other hand the Delian chorus "knew each man's beat" *krembaliastys*, i.e. could fall in with his rhythm or tempo. *Hom. H. Apollo*, 162: *krembala* were castanets, *Athenaeus*, 636*c*.

99. Schweitzer, ii., fig. 21.

100. Schweitzer, ii., fig. 15.

101. Schweitzer, ii., fig. 23.

102. H. B. Walters, *A History of Ancient Pottery* (London, 1905), i. 284, fig. 84.

103. Schweitzer, ii., fig. 20, compare p. 98.

104. O. Rayet and M. Collignon, *Céramiques de la Grèce propre*, fig. 17 (=P-C vii [1898], fig. 52).

105. The Temple of Hera at Olympia, W. Dörpfeld, *Olympia Baudenkmäler*, i. (1892), pls. XVIII–XXIII, *Textband*, 27–36: P-C vii. 362 ff. The "proto-Doric" capital from Cyprus is published in *Archaeologia*, lxxviii. (1928), 41–4 by Mr. G. Jeffery, Inspector of Monuments to the Island Government. The new movement toward a rationalized architecture certainly falls within the same period (eleventh and tenth centuries) as the structural treatment of vase surfaces, Schweitzer, i. 78–79.

106. The Shield of Achilles, *Iliad*, xviii. 478–608.

107. Inlaid metal work, Bossert 282–85, 287–94: the "Cup of Nestor," B 276; naturalistic gem-engraving, B 315 (*d*, *h*, *i*, *k*), 319 (*a-c*, *e*), 320 (*a-c*, *g*, *h*), 326 (*d*, *i*): faience, B 81–83: fresco, B 64–68, 70.

108. Bossert, Nos. 54, 64, 67–68, 159, 292–93. Evans, *Palace*, ii. 1, figs. 275–77 (sweet peas).

109. Mycenaean inlaid metal work, Bossert, Nos. 289–93; for the "eddying stream of Ocean" 294: the "Hunter's Day" (*Journée de Chasse*), C. S. Clermont Ganneau, *L'Imagerie phénicienne* (Paris, 1880), i (=P-C iii., fig. 543): a duplicate from the same hand, Myres, *Cesn. Hdbk.* 4556.

110. Axial symmetry on bowls from Cyprus, Myres, *Cesn. Hdbk.* Nos. 4555, 4556 (P-C iii. fig. 543); and also in P-C iii. fig. 547, a city wall marks the beginning and end of the zone: in 547, the whole composition converges on it, and in 4555 diverges from it. In *Cesn. Hdbk.* in 4561 (P-C iii. fig. 482), a scene of worship, and in 4557 a royal feast, is axial: in 4555 (ii) two shepherds, diametrically opposite, determine the movement of their flocks: in 4554 (P-C iii. fig. 552) a royal group dominates the outer zone, but there are two subordinate symmetries. Similar bowls with converging movement from Praeneste, Poulsen, *Der Orient*, fig. 15; and from Delphi, fig. 11. Shields from the Idaean Cave, see note 92 above.

111. "Wave coil" depicting sea surface, in early Hellenic art: on gems, A. Furtwängler, *Antike Gemmen* (Berlin, 1900) III, 96, fig. 66, G. Lippold, *Gemmen und Kumeen*, Stuttgart, pl. 49 (12): in vase-painting, F–Reichhold, pl. 41; Pfuhl, III, 233, 393: in fresco, F. Wegge, *Etruskische Wandmalerei* (Halle, 1921), 55, fig. 52. For a complex composition in which the "pilasters" (here formed by "sacred tree" designs) are also the centers of antithetical groups, compare the silver bowl, *Cesn. Hdbk.* 4554 (P-C fig. 552), already quoted in note 110.

112. The notion that the *Iliad* and the *Odyssey* are composed on a deliberate plan was not very popular as long as it was fashionable to suppose that they were not "composed" at all, but "emerged" from a scrapbook or a committee room. That repetitions were due, not to laziness or editorial lapses, but to an art not very remote from that of other zone designs, is noted by J. W. Mackail, *Lectures on Greek Poetry* (London, 1900). "Much certainly, probably most, of what is suspected as copying by a later hand is deliberate and original; like the patterned figures in a tapestry or the carved figures in a processional frieze. For the genesis of the epic this kind of repetition was an essential element in design." Compare J. W. Headam, *Cambridge Praelections* (Cambridge, 1906), 112 on "the highest of artistic

qualities, the power of construction, of designing a composition from the beginning to the end and controlling the relations and proportions of one part to another." But the first systematic analysis of the *Iliad* as a whole on these lines is due to J. T. Sheppard, *The Pattern of the Iliad* (London, 1922). It is only because Mr. Sheppard's "pattern" of the Shield of Achilles (pp. 1–9) does not seem to carry his own method into as intimate detail as the clue supplied by geometric vase-painting permits, that I have dealt with this matter more fully in the text.

For an elaborate example of panel-composition in fifth-century prose, E. Täubler, *Die Archaologie des Thukydides* (Leipzig, 1927), especially the marginal analysis on pp. 120–129; thus, Thuc. i. 1 has the structure 1. 2. 3. 2. 1: this recurs in Chapter XI; between these comes the splendid movement (Chaps. II-III)

1 a b, 2 a b, 3 a b | 4 (a a b c c) | 1 a b, 2 a b, 3 a b | 4

followed (Chaps. IV-VIII) by a longer but simpler composition;—

|| 1 2 a b, 3 (a b c), 2 a b, 1 ||

For similar artistry in Æschylus *Prometheus*, G. Thompson, *CQ* xxiii. (1929), 155 ff.: in Herodotus, Myres, "Herodotus the Tragedian," in *A Miscellany presented to J. M. Mackay*, Liverpool, 1914, 88–96.

113. Unfinished statue in Naxos, L. Ross, *Reisen in den griechischen Inseln* (Munich, 1840), i. 34 (plate): other examples, E. A. Gardner, *JHS* xi (1890), 129–42. For early architecture see note 105.

114. H. S. Jones, in *JHS* xiv. 30–80, pl. I.

115. Contemporaries of Benvenuto Cellini killed each other for art's sake as for power or love.

116. I have dealt in greater detail with the builders of the city-states in my George Slocum Bennett lectures on the *Political Ideas of the Greeks* (New York, 1927), especially Lecture II.

INDEX

N.B.—The Notes (pp. 540–605) are not fully indexed, but references will be made easily from the relevant passages in the Text.

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